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The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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VOL. I. ROCHESTER, N. Y., FEBRUARY, 1893. NO. 1.

WESTERN NEW YORK HORTICULTURISTS.

THIRTY-EIGHTH ANNUAL MEETING—PRESIDENT BARRY'S ADDRESS—PAPERS AND REPORTS FROM VARIOUS SECTIONS—NEW OFFICERS AND CHAIRMEN OF COMMITTEES—INTERESTING DISCUSSIONS.

The thirty-eighth annual meeting of the Western New York Horticultural Society was held in the City Hall, in this city, on January 25th and 26th. This society is one of the oldest of its kind in the country, and its membership includes all the prominent nurserymen and horticulturists of this section, many of whom are of world-wide reputation. The opinions of Western New York horticulturists command attention, and therefore the meetings of this society are of more than ordinary importance. The attendance was unusually large. The capacious council chamber was scarcely large enough to accommodate all who came. Professor L. H. Bailey brought fifty students from Cornell University to attend the sessions. There was a fine display of apples, pears and grapes.

Early in the first session the following officers were elected: President, William C. Barry, of Rochester; vice-presidents, S. D. Willard, of Geneva, W. R. Smith, of Syracuse, G. A. Sweet, of Dansville, C. L Hoag, of Lockport; executive committee, C. M. Hooker, of Rochester, C. W. Stuart, of Newark, Nelson Bogue, of Batavia, E. A. Powell, of Syracuse, H. S. Wiley, of Cayuga. Committees of which the following are chairmen, were appointed: Native fruits, J. J. Thomas, Union Springs; foreign fruits, George Ellwanger, Rochester; nomenclature, William C. Barry, Rochester; ornamental shrubs and trees, George Ellwanger, Rochester; entomology, Dr. J. A Lintner, Albany; garden vegetables, W. H. Wing, Geneva; ornithology, C. A. Green, Rochester; botany and plant disease, M. B. Waite, Washington; chemistry, Dr. G. C. Caldwell, Ithaca; flowers and bedding plants, Charles Little, Rochester; grapes and small fruits, C. M. Hooker, Rochester.

PRESIDENT BARRY'S ADDRESS.

In his annual address President Barry discussed in a very intelligent manner the leading subjects which are before the nurserymen and horticulturists of the country. Following is an abstract:

SCIENTIFIC AGRICULTURE.—The sciences of botany, chemistry, mineralogy and entomology are all closely related to every operation in connection with the tilling of the soil and the growth and development of plants, and the fortunate possessor of a knowledge of these sciences is specially equipped for his work, and is certain to distance all competitors who do not enjoy the advantages which such an education affords. At no period in the history of this country has it become so apparent, even to the indifferent and careless observer, that the cultivator of the soil must possess more than ordinary intelligence in order to succeed. With keen competition on every side it is imperatively necessary that every acre of land in our possession should be productive in some way and to some degree. It is a well-known fact that even in this particularly favored state, famous the world over for remarkable climate and fertile soil, there are now thousands of acres of waste and uncultivated land which should be reclaimed and cultivated; hundreds of farms impoverished and unproductive, which should be made to yield good crops; innumerable orchards which are old and going to decay, which should be uprooted and replaced with young, thrifty, fruit-producing trees. No matter to what cause this unsatisfactory condition of things is due, the fact remains the same, and every member of this society interested in the welfare and prosperity of the state, and all are, should do his utmost to bring about the needed reform. I am aware that the members of this progressive organization are not to be counted among those whose surroundings are of the nature referred to, but it seems to me it is our duty as intelligent cultivators not only to do well ourselves, but to encourage others to do likewise. It must be admitted that the influence of educated labor is one of the requirements of the times, and that the agricultural school is one of the most efficient agencies for the development of the agricultural resources and products of the state. The modern farmer and fruit grower must keep abreast with the times. He must be thoroughly posted as to markets for his products, for no matter how high the grade of his productions, or how neatly and tastefully put up, if the right market be not found, the prices received will not be remunerative. The farmer should not keep poor stock of any kind. The cost of caring for poor animals is as much as for good ones, and such stock is unsalable. No good merchant carries unsalable stock. The same principle applies to fruit growers. Cultivate only the best kinds, that sell, and if you are unfortunate enough to possess unprofitable varieties, graft them over or destroy them.

EXPERIMENT STATIONS.—The importance and utility of experiment stations can in my judgment hardly be overestimated. There are many no doubt who question the wisdom of expending money in this manner, but experiments must be carried on by some one; individuals certainly cannot bear the expense, hence if the state or national government is unwilling to appropriate the necessary funds, the work of scientific investigation and experiment cannot be undertaken. The value of the agricultural products in New York state amounts in the aggregate to at least $130,000,000 annually, or, upon an average, of $340 a year for each of our 380,000 farmers. It is estimated that the capital invested in the dairy industry in the state is $400,000,000. The work carried on at these stations is of such a character that it is well nigh impossible to obtain immediate results. Much time is required to make accurate and reliable investigations and experiments, and as all of the stations are comparatively young, it is hardly fair to demand too much of them at present. I predict that ten years hence, when these stations are well under way, their importance and necessity will be universally recognized, and then there will be no difficulty in obtaining from the state appropriations which will be ample for all the work. Convinced as I am of the immense benefits that will accrue to the state through the development of agricultural resources by means of scientific experimentation and investigation, I call upon you, members of this society, to exert all the

influence you possess to secure for this institution such appropriations as are necessary.

INSECTICIDES AND FUNGICIDES.—Entomologists inform us that there are three hundred thousand varieties of insects, most of which are not injurious, but many are liable to become so through change of temperature or lack of sustenance. This fact shows how important the science of entomology is. The department of agriculture is entitled to the greatest credit for the efforts it has made to study the life, history and characteristics of these insects, as well as to discover means of checking their ravages. The experiments in insecticides and methods of spraying have been invaluable. We are informed by the department that 250 new or nearly new injurious insects have been studied to a greater or less degree during the year. The operation of spraying is carried on in California in a most thorough and systematic manner, and its methods are worthy of consideration. In large orchards a tank is placed on a farm wagon and filled with the material to be used. Four pieces of rubber hose with nozzles lead from a force pump placed across the tank, and with one good man at the handle and four men on the ground, four large trees are sprayed at the same time.

MARKETING FRUIT.—One of the greatest difficulties fruit growers encounter to-day is the marketing of their products. For some unaccountable reason the crop of almost every grower is as soon as ripe, hurried off to three or four of the large eastern markets and immense quantities arriving at the same time cause prices to drop, to an extent which is disastrous to the shipper. How to secure a systematic and uniform distribution of fruit is a vital question which the grower is now forced to consider. The Niagara Grape Co. was the first to originate and adopt a plan of distribution which has been successful and satisfactory. In view of the low prices received this year for grapes, the growers in the vicinity of Keuka Lake have called a public meeting of the vineyardists of the state inviting them to co-operate for the purpose of devising some plan whereby reasonable prices may be obtained in the future. This action is certainly prudent, and the question should be kept under consideration until some satisfactory conclusion is reached. By combining, growers will be enabled to employ only competent persons whose business it shall be to look up markets, attend to shipments and secure fair prices. Trickery and deception in the way of putting up should be discountenanced and condemned, and a reputation for honor in grading and packing should be established and maintained. It is easy to build up a reputation for good goods and careful grading, and such a reputation will be invaluable to its possessor.

HOME AND FOREIGN MARKETS.—There is a ready sale for good American apples abroad, but foreign buyers this year make numerous complaints about the consignments, which they say were inferior in quality and poor in condition. This was principally Maine and Canadian fruit. Only fruit of best quality can be shipped abroad advantageously. Last year at this time about 1,000.000 barrels had been sent to the English market. The amount shipped this year is 100,000 less. The apple crop, as a whole, in New York State was not what it should have been owing to the prevalence of apple scab and injurious insects. Hardly an orchard or a variety escaped injury. In Ontario County, however, the fruit crop was large, and growers in that section are extremely gratified with the results. Instead of shipping the usual amount abroad a new market was found at home, as the following illustrates : In New Hampshire it is stated about 500,000 barrels were shipped over the Boston & Maine Railroad, two-thirds of which were raised in New Hampshire, and the noticeable feature about this crop was that the bulk of it was shipped to western cities. Good prices were paid to the farmers, the price per barrel averaging $1.85. The estimated cost of producing the fruit is about 50 cents per barrel, hence the grower must realize well from his crop. A purchaser from Sioux City, Iowa, is said to have left $25,000 in Rockingham County, N. H., for apples, and so pleased is he with the fruit that he intends to become a regular buyer. The sales reported show that not less than $700,000 have been received for apples shipped this year from New Hampshire. An interesting experiment in shipping American grapes to England was made this fall by the growers in Chautauqua County, who shipped several carloads by steamer Germanic, arriving in Liverpool the 5th of November; the grapes were unloaded in good condition, and were sold at 39 cents to 45 cents per basket; 1,000 baskets sent to London sold at 45 cents to 57 cents per basket. It is said that the grapès sent were Concord, and that they netted the producers 20 cents to 23 cents per basket, but that the flavor of the fruit was not satisfactory to the English palate. It is believed that if the high-flavored varieties could be sent safely a good market will be established there. It is hoped that the experiment will be repeated next year on a larger scale, and that Delawares and well-ripened Catawbas and other choice kinds will be forwarded to make the test a critical one.

Reference was made to the death, since the previous session, of Joseph Harris, Moreton Farm, Monroe County; Godfrey Zimmerman, Pine Hill, Buffalo; P. C. Dempsey, Ontario; Thomas Hogg, New York City.

J. H. HALE ON PEACH CULTURE.

J. H. Hale, of South Glastonbury, Conn., gave an entertaining talk on "Peach Culture" This was one of the most valuable features of the meeting. Mr. Hale was given fifteen minutes to talk. He occupied half an hour and then as much longer answering questions, and as President Barry was obliged to declare the discussion closed in order to present the programme, Mr. Hale was surrounded at every intermission during both days by anxious inquirers. Mr. Hale is one of the most widely known fruit growers of the country. He has large orchards in New England and the South, principally in Connecticut and Georgia. The narrative of his success in the growing of peaches in Connecticut produced little less than amazement among his hearers. The impression has prevailed generally that the soil of Connecticut, noted for its sterility, is scarcely able to produce enough grass to keep a woodchuck alive. Mr. Hale stated calmly that in six years thirty-five acres of peach trees had returned crops which brought $60,000, and when he explained in detail how it was done his hearers were incredulous no longer. He said when he decided to grow peaches in Connecticut he put all the money he could scrape together into land and trees. The first crop from thirty-five acres netted $9,000; the second $2,000, paying expenses, and the third $28,000, as the result of an expenditure of $2,500 for commercial fertilizers. He deprecated the use of stable manure as making too much, too rapid and too tender wood growth. He advocated pruning for fruit rather than for style. He detailed the method of packing fruit in baskets, laying stress on the importance of keeping the quality the same throughout the basket. He favored the Alexander, Waterloo, and a dozen others, the Mountain Rose, Keyport White and the Stump of the white varieties; Hill's Chili, Elberta, Smock and Wonderful of the yellow varieties.

TREES FOR STREET PLANTING.

Wm. McMillan, Superintendent of Parks, Buffalo,

N. Y., in the course of his paper on "Shade Trees in City Streets," said:

Americans despise the day of small things. This national foible is always prominent in the selection of trees for street planting. The general practice is to secure the largest trees that can be obtained or conveniently handled. If nurserymen can't or won't furnish them to order as wanted, they are often procured from neighboring woods if the kinds can be found there. It is surprising and mortifying to every experienced grower of trees to see each spring the numerous wagon loads which countrymen bring in from swamps and thickets, and expose for sale in our streets day after day with little or no protection from sun or wind. They are usually much larger than the most overgrown nursery stock, and the younger saplings twice or thrice the height becoming to their age. The only roots are a few stout prongs, but they are bought in preference to the nurseryman's "small fry." They are set out in the smallest holes that will admit the tusks, and the tops are either left unpruned or entirely chopped off. They remain standing like bean poles for one or more years. Then they are pulled out and other bean poles put in their places. It is said "experience teaches fools," but on this subject they need many years of schooling, else the class always under instruction could not be so large.

Nurserymen preach against this practice incessantly, but the fools think they see through their selfish tricks, and are too wise to be guiled so easily. But they cannot see the patent facts that trees grown in nurseries have needful qualities of root, stem and branch, entirely lacking in the spindly saplings that have struggled for life in a shady thicket. The nursery plant is forced into vigorous growth from the start by furnishing it with rich soil, and special cultivation to induce numerous fibrous roots near the stem, which is trained to an ideal standard of strength and symmetry by proper pruning, and ample allowance of space for light and air. It is transplanted from time to time to force a closer mass of small fibres by cutting back the leading roots. When sold it can then be dug up with most of its rootlets uncut, and the small wounds are easily healed. Thus the risk of transplanting is slight, but it is always in inverse proportion to the size. The younger the tree after the first few years are passed, the better the bargain both for nurseryman and customer.

Of course in street planting the smaller the tree the greater the risk of serious damage by accidents that would be trifling to one of twice or thrice the size. This argument is the clincher in all discussions on this point. For this reason elms, maples, lindens and horse-chestnuts which can be safely planted of a much larger size than tulip trees, oaks, or nut-bearing trees are so commonly preferred. Yet the rule holds good that even in street planting the youngest trees of whatever kind that can be protected with a reasonable chance of safety ought to be preferred.

ARE VARIETIES RUNNING OUT?

Professor L. H. Bailey, of Cornell University, in a paper entitled "Are the Varieties of Orchard Fruits Running Out?" said:

The most direct method of approaching the subject is through the historical method. What proportion of the varieties cultivated fifty or a hundred years ago are now known? If any of these old varieties are not cultivated at the present day, what are the causes of their disappearance? In 1806 McMahon catalogued fifty-nine varieties of apples for cultivation in North America. Of these, twenty-two were offered for sale in 1892. In 1817, William Coxe gave a list of 101 kinds of the best apples for cultivation in North America, of which forty were still offered for sale in 1892. In 1845 A. J. Downing described 190 varieties of apples, of which 84 are now offered for sale. The percentages of apples in these lists which have persisted to our time as commercial varieties are 37, 39 and 46 respectively. In other words, from 63 to 54 per cent. of these have disappeared within a century. Why? The conclusion of the whole matter as I now see it is this: Varieties of orchard fruits, which are propagated by buds, do not run out or wear out, but they disappear because they are ill-adapted to various conditions, because they are susceptible to disease; they are supplanted by better varieties or those which more completely fill the present demands or fashions.

LITTLE INJURY FROM INSECTS.

Dr. J. A. Lintner, of Albany, New York State Entomologist, in his report said:

The year has been one of remarkable exception from insect injuries, as the result, beyond question of meteorological conditions, quite unfavorable to the multiplication of our more common insect pests. This has been particularly noticeable in the very few complaints that have been received of injuries to fruits—certainly not one-fifth of the average of preceding years. This, in part, may be ascribed to the better knowledge of methods of dealing with the enemies of fruits, to which our fruit growers are becoming educated, and to the rapidly growing use of insecticides and spraying instruments.

Certain it is that several of our most noxious insects, which almost annually are the cause of serious injury, did not present themselves in sufficient number to call for active operations against them. Thus, apple trees, for the most part, escaped their usual early spring visitation from the aphis. The cherry tree aphis was not prevalent. The orchard tent-caterpillar was far less abundant than in preceding years. Not a single communication came to me relating to the operations of the spotted bud-moth, which had been thoroughly destructive in 1891, and a general cause of complaint from orchardists in Western New York. No very serious attacks have been reported to me upon garden or field crops. No complaint has reached me of injury to grain by the grain aphis. The year has further been an exceptional one in that no new insect pest has come under my notice, calling for special investigation.

WORLD'S FAIR EXHIBIT.

George T. Powell, of Ghent, who has charge of the horticultural exhibit of the state at the World's Fair, explained that because of lack of room in the horticultural building and the late date at which preparations in this state were begun, the work of securing a creditable exhibit had been greatly embarrassed. Only 507 square feet of space can be given to the New York State exhibit at first, but more may be given for fall exhibits.

George C. Snow, of Penn Yan, made an earnest appeal to the grape growers to send a creditable exhibit.

In a paper on "Causes Affecting the Fruiting of Pears and Apple," M B. Waite, of the National Department of Agriculture, said that self-pollenation was sterile in 66 per cent. of the varieties experimented with. As to the quantity of fruit produced by cross-pollenation, Mr. Waite said that a larger and rougher fruit was produced while self-pollenation had the smaller and finer looking fruit but the specimens were not typical of the variety. Insects are the most efficient agents in the transportation of the pollen.

Mr. Arnold, of the committee on the black knot law, reported the amendment formulated by the committee. The change looks towards making it a misdemeanor on the part of a mayor or supervisor to refuse to enforce the existing law. It also provides for an increase of the salary of the commissioners. President Barry appointed J. S. Woodward a committee to present the proposed amendment to the Legislature with instructions to use all lawful means to effect its passage.

SUGGESTIONS TO GROWERS.

FROM A LEADING MANUFACTURER OF FRUIT PRODUCTS—INDUSTRIES WHICH CREATE A DEMAND FOR THE APPLE—NEED OF CO-OPERATION BETWEEN GROWERS, MANUFACTURERS AND DEALERS.

One of the largest manufacturers of fruit products of the country is Michael Doyle, of this city. Few are as well posted as he on the character of the demand for large quantities of apples, here and abroad. In conversation with a representative of THE NURSERYMAN, Mr. Doyle called attention to the superior advantages which the cheap orchard lands and the fertility of the virgin soil of the Mississippi Valley offer for the cultivation of the apple. During the last five years the apple has been grown extensively in Missouri, Kansas, Iowa, and Southern Illinois, where in eight or nine years it attained the growth which is attained in eighteen or twenty years in the eastern states. Good orchard lands can be had at from $15 to $30 per acre, and there are now in those states giant orchards in comparison with those of the East. Some of them are from 500 to 1200 acres in extent. "Uniformly better crops and greater certainty of results can be obtained there" said Mr. Doyle. "There have been, I think, but two failures of crops in nine years in the Mississippi Valley, while here in the east a good apple crop has been an exception. Fifteen or twenty years ago young trees from Western New York stocked these western orchards, but now all the trees are grown there. Some of the largest nurseries in the country are in that section. It may seem strange, but it is a fact, that young trees are sent from Arkansas to this city. A number of car loads were received here last year, and already shipments are arranged for this season. The prices realized seem to give a profit to the western growers. The chief advantage of the western stock is the quick growth of the trees, two-year-olds being as vigorous as those which have attained a growth of four years in eastern soil. The principal varieties grown in the West are the Ben Davis, Winesap, Jennetting and Jonathan. The varieties grown in the East are also cultivated there, but not to the extent that those named are. There is a profitable market for all fruits grown in the western states on account of the close proximity of some of the largest markets of the country: St. Louis, Kansas City, St. Joseph, Omaha, St. Paul, Minneapolis, Denver, and more western points. The difference in the freight alone as compared with that in the East is a great advantage—75 cents to $1 per barrel—quite a respectable profit of itself. Pears are grown quite largely there, and raspberries may be cultivated to good advantage if proper attention is given them.

"Western New York still holds its own because of the intelligent cultivation of its growers as compared with that of western growers. The yield in the West might be doubled if there were the proper treatment of the soil and pruning of trees. There is a sufficient market in the West for all the fruit that may be grown there in the next twenty-five years."

PECULIARITY OF THE APPLE.

"A peculiarity of the apple," continued Mr. Doyle, "is the variety of the uses to which it may be put. Both in its fresh state and canned there is an enormous demand here and abroad, and the quantity evaporated is astounding, the figures reaching millions of pounds annually. Not only the best fruit but the poorer quality is sliced, the water is evaporated, and the product is packed for exportation to France and other countries, where it is manufactured into cider and apple brandy. Then again, the progress made in the manufacture and preservation of cider has given a fresh impetus to that branch of the industry, and has opened a market for a much larger amount of cider-apples, and at better prices than have ruled for many years. The laws, too, which have been passed in the eastern and in many of the western states throw a safeguard around the genuine article, and as the price which consumers are willing to pay is remunerative, there is no reason why the business should not be materially increased during the next few years. Then again, the apple is being used more extensively for distilling purposes. Its richness in sugar, and its easy convertibility into alcohol, together with the excellent quality and bouquet of the product renders it especially valuable and desirable for blending purposes. A profitable business, a thousand times the present volume, could be done in this direction. Any consolidation for the manufacture of alcohol or the advance in price thereof must inure largely to the advantage of the distiller of apple-brandy. Fully one half of the dried fruit exported to France is used for this purpose, and it is made the base of a very profitable industry to French manufacturers. There is no reason, whatever, why this article may not be produced here and thousands of dollars be saved to our people, which now annually goes abroad.

"All of these things are of direct interest to growers of nursery stock, and to dealers, and they are subjects of such importance to them that they ought not for a moment to be overlooked. I might go farther and allude to the use of apples in the manufacture of jelly, which is increasing. People have had a surfeit of the common glucose jelly which has been in the market for years, and there is a perceptible demand for a pure quality. The laws in regard to food will undoubtedly increase the demand in the near future. This branch can be made a profitable avenue to an intelligent and honest manufacturer, who will endeavor to produce and sell a pure article at a reasonable price.

"The industry in fruit generally in Western New York cannot but increase. There is a demand which exceeds

the supply. Some of our leading canners are unable to procure a sufficient quantity of certain varieties. Those deficient are, principally, red and black raspberries, currants, blackberries, and other small fruits. The heavy duty which the present tariff imposes on fruit jams of foreign preparation, as well as the intelligent appreciation of American consumers that our own manufacturers can and are making as good, if not better qualities than have ever been received from abroad, must also lead to a much larger and more profitable outlet for this class of fruit. And this must be to the advantage of the growers as well as the manufacturers."

CO-OPERATION NEEDED.

"What is really wanted," said Mr. Doyle, in conclusion, "is more intelligent and systematic co-operation between growers, manufacturers and dealers. Many growers are entirely in the dark as to the varieties which are best adapted to their soil, and as to the markets in which they are forced to sell. Many enter the business in a hap-hazard fashion with little forethought or care as to the selection of the varieties or the soil, or the adaptability of the fruits to the most profitable markets. It would be much better if the growers would organize, particularly here in Western New York, one or more syndicates, which are so common in France, the good results of which have so firmly impressed themselves upon me. The growers meeting the manufacturers and dealers in such associations are better enabled to know which fruits are wanted, which are most profitable, and which should be more or less curtailed. By such a method here there would scarcely ever arise any large surplus of stock which may be unsaleable and an entire loss to the grower, while the dealer is idle because of no stock of the variety in greatest demand. Such a plan would do away largely with the bane of overproduction, and its opposite, scarcity. The vinegar law would never have been secured had it not been for the co-operation of growers and dealers. Pure food is in demand; buyers are becoming more discriminating, and all this is a very happy augury for the grower.

"What is needed is intelligent direction as to the best markets, the best qualities and varieties, and the greatest demand. A good quality at a reasonable price is a standing advertisement, and increases demand. A poor quality limits demand. Any effort to debase any of the qualities ends in disaster to the manufacturer and impairs very seriously the industry in all its branches."

UNITED STATES Senator Wolcott, of Colorado, last month made an effort to discontinue the sale of Columbian postage stamps except to such persons as may specially call for them, and to keep on sale the ordinary stamps. Complaint has been made regarding the inconvenient size of the new stamps and their tendency to curl.



WILLIAM C. BARRY.

One of the most prominent nurserymen of the country is William C. Barry, the junior member of the firm of Ellwanger & Barry, of this city. He has a world-wide reputation among horticulturists, and throughout Western New York he is well known among all classes by reason of his prominence in large commercial interests. He is the Vice-President of the Rochester Chamber of Commerce, an organization representing 600 of the most prominent business men of the city; Second Vice-President of the Flour City National Bank; a director of the Rochester Trust and Safe Deposit Company; a director of the Rochester Railway Company; a member of the Board of Park Commissioners of Rochester; President of the New York State Experimental Station, and President of the Western New York Horticultural Society.

It is in his connection with nursery interests that he is best known, because he has made these his life study. He is a graduate of the University of Rochester, and he completed an extended education in the great German universities. He is an excellent French and German scholar. He has acquired a thorough knowledge of all branches of the nursery business, and is familiar with every kind of fruit and ornamental tree and shrub. He aims to keep not only abreast, but ahead of the times on these matters, and his articles on practical subjects connected with the trade are of especial interest.

NURSERY INTERESTS.

DEMAND FOR CONSOLIDATION—HOW A UNION OF ALL THE PROMINENT COMPANIES IN ANY SECTION WOULD EFFECT A REDUCTION OF EXPENSES TO A MARKED DEGREE—PRICES WOULD ADVANCE TO A POINT CONSISTENT WITH THE RISKS WHICH CHARACTERIZE THE BUSINESS—OVERPRODUCTION OF STOCK WOULD BE AVOIDED—GROWERS AND DEALERS ALIKE BENEFITED.

Below are given opinions of leading nurserymen on a subject which is but just commanding the serious attention of growers, who feel that the time has come when decided action should be taken looking toward a remedy for evils which all have recognized, but which have been allowed to exist almost without attempt at change. The question at issue is: What may be done to advance prices and prevent embarrassment resulting from overproduction or scarcity of stock?

A prominent nurseryman said: "I believe the time is near at hand when the leading nurserymen of Western New York will see the advantage of a consolidation of their interests. This is a matter which is just beginning to be thought of, but it is one that should receive prompt attention. The remarkable advances made in the nursery trade, the extension of territory devoted to the business and the tremendous competition that has arisen have increased expenses to an enormous extent, while the prices at which stock is sold have depreciated rather than advanced. Of course, notwithstanding these facts, the increased amount of stock sold each year has left a profit over the heavy expenses, but this profit is not commensurate with the amount of business done and the great risks assumed. Within a short time a few of the most prominent growers in this section have expressed a feeling that this condition could be remedied by a union of interests. It is a very simple plan and I think it will commend itself to all who are interested, if they will but take time to consider it. In many lines of business this plan has been adopted with most beneficial results. If, then, the prominent growers of Western New York, for instance, should agree to pool their issues by the formation of a stock company, what a saving of expense would result. Compute the amount expended annually by each of the big nursery firms and companies in this section alone for printing, postage, office and field work, etc., and add in each case a good round sum to cover the cost of the special effort that is made to overcome sharp competition. Count also the expense incurred at frequent intervals in the endeavor to get rid of surplus stock, and consider the loss that usually occurs after every effort has been put forth.

"With a stock company the saving along these lines would be very great. One office, with one force of clerks would do the work which is now done in from twenty-five to fifty offices. One catalogue would suffice and one man could handle the advertising matter. The saving in press work and postage would be a handsome profit over the amount now expended. One foreman in each department would be sufficient. And so throughout the various details of the business. See what an advantage there would be in such a union of interests in the matter of importing stock. One order would be sent instead of fifty, and there would be no competition. The stock company would get the best.

"Here then would be a solution of the trouble of overproduction. In the present state of competition and distrust no understanding can be had regarding the amount of certain kinds of stock that shall be grown. Were an arrangement attempted, some one, as it is, would surely break over. With a stock company the interests of the members are identical and the law of supply and demand could be met under a definite plan. The question of prices would solve itself. With the control of the stock in an entire section, such a consolidation as is proposed could advance prices to a point consistent with the expense and risk which characterize the business, and the profits which were known in times when competition was not so strong would return, for the demand for the best of all kinds of stock will continue to increase, and with such opportunities as would accrue to a stock organization the market in the particular section involved could be controlled.

"How would such an organization be affected by similar ones in other sections, or by those in the business outside of any organization?" you ask. It would simply be a case, with them, of inability to procure in sufficient quantity the stock handled by that particular organization, and it is this very fact that would cause the establishment and maintenance of prices which would produce the proper profit. There could be little or no competition.

"And the dealers, too, would benefit by the plan proposed, especially if they should take stock in the organization. They would know just how much of certain kinds of nursery stock was available for the season's trade from the sections where such organizations might exist; and instead of having to search the country over for the article needed, they could place their hands upon it at once. They would benefit by the consolidation of the growers in many ways.

"I am sure that such an organization would pay better than a general investment in railroad or any other kind of stock. The stock of the most prosperous organizations pays an average of 8 per cent., and I am confident that 10 per cent. would be a low figure to estimate as the profit from a stock company of the leading nurserymen. If the organization should be heavily stocked I believe it would pay 20 per cent. Of course good men should be behind such an enterprise. But such men are available. As I said before, the time is coming soon

when such a project will be announced. Once formed, the stock company would have, besides the nurseries of its members, a large tract of land in some desirable locality where the business could be extended to an almost indefinite point."

One of the best known nurserymen of Geneva heartily endorses the project of a consolidation. "It should be brought about by all means," said he to a representative of THE NURSERYMAN who called upon him last week. "I am too busy to-day to talk at length on the subject, but you may say that the idea has my cordial endorsement. I have been thinking of it some time and I hope soon to see it brought into operation. The leading nurserymen of this section should assemble at Rochester, where the necessity for such an organization could be talked over, and if not at that meeting, certainly within a short time the consolidation could be effected. The plan would cause a great saving of expense. One man, for instance, could do all the buying and another all the selling. It would simplify matters greatly. I would be in favor of a forfeit to be paid by any member of the stock company who should violate the understanding arrived at regarding the planting of certain kinds of stock. I am glad to see the subject discussed in a trade paper which will undoubtedly do much good in matters of this kind among the nurserymen of the country."

FERTILIZERS FOR TREES IN NURSERY ROW.

For some years I have been trying to find out if commercial fertilizers are of any use to the grower of trees in the nursery. Many of the leading farmers and gardeners in this country are using them with great success, but I fail to find a nurseryman who has made a success of them, although there may be many who would be glad to praise them if they had the opportunity. The fertilizer problem is a very grave one for us to solve. The cost of barn-yard manure and the trouble and expense of applying it is something alarming to contemplate, in view of the low price of trees, and then to think that 70 per cent. of all barn-yard manure is nothing but water.

The coming season I propose to make a thorough test of the fertilizer question on plums and standard pears and see if I can't carry as much real fertilizing value in a bushel basket as I have heretofore drawn on a two-horse-wagon. I wish, Mr. Editor, that you would get the nurserymen to relate their experiences and mode of applying different forms of concentrated plant food.

I shall take pleasure in telling you what I find out next season. E. O. TERRY.

Weedsport, N. Y.

THE OUTLOOK AT GENEVA.

The general outlook for business at Geneva during the coming season is very fair, much better than it was at early winter, especially just before the presidential election. Dealers in general report good sales, larger than last year. Occasionally the familiar tune "hard selling" is heard, but not so often from those who are "pushers." Geneva growers would like to have the bottom placed in wholesale prices, which seems to have been so completely knocked out by people who evidently think that there is a large surplus of stock in the market. Just where to lay the blame for the present condition of affairs is hard to tell. It certainly was not brought about by Geneva nurserymen, or there would be less stock for sale there. While the demand seems to be good, sales at wholesale are slow at present.

Geneva is full of splendid stock, far better in quality than the previous years' production, because of the favorable growing season of 1892. Prices of course are very low. There is a good supply of apples, pears, plums, peaches and other larger fruits, as well as a full line of small fruits. Ornamental trees and shrubs, roses, vines, etc., are plenty. There have also been large importations of English gooseberries, French and Holland roses and clematis, tree roses, rhododendrons, azalias, and other plants not grown largely in this country.

A pomological meeting and exhibition of great interest was held recently by the Geneva Grange. This grange is made up largely of nurserymen, fruit growers and professional men from the Experimental Station. In addition on this occasion, many of the prominent nurserymen were present by invitation.

There was interesting discussion on various topics relating to fruit growing. The first subject introduced was "What kind of fruit growing pays best in this locality?" D. H. Patty put in a strong plea favoring Reine Claude plums. Mr. Willard was decidedly in favor of Keiffer pears. E. A. Brown favored a variety of fruits. It seems to be the opinion of the largest orchardists in this section that apples and plums are the most profitable. The subject of commercial fertilizers, including wood ashes and stable manure, was discussed and various opinions were expressed. Prof. Beach, of the State Farm, spoke on the question of spraying fruit trees with metallic poisons, and said it would take many generations to produce any injury to the plant, taking 1100 years to saturate the soil with a five per cent. solution one foot deep, not allowing for any leaching. The question, "Is it better to plant orchards by varieties separately, or to mix the varieties?" brought forth considerable debate. Several leading men advocated separate planting. Mr. Hammond held that it made no difference. The majority of those present favored the plan of mixing the varieties. Mr. Willard said there were varieties of strawberries and grapes that will not produce fruit unless near other varieties, and favored intermingling varieties.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance	$1.00
Six Months	.50
Foreign Subscriptions	1.25
Six Months	.75

Advertising rates will be sent upon application.

ROCHESTER, N. Y., FEBRUARY, 1893.

SALUTATORY.

The publishers of THE NATIONAL NURSERYMAN present their first issue, confident in the belief that there is a wide field of usefulness before it, and trusting that an idea of its scope and aim may be obtained by a perusal of its pages. While for some time we have thought that such a publication was needed, actual work upon its preparation was delayed until the time left for the production of the first number was limited.

In response to the announcement of the project, there came to us from all portions of the country cordial endorsements and assurances of hearty support. The undertaking met with encouragement beyond our expectation, and proved the necessity for a journal of this kind.

THE NATIONAL NURSERYMAN will be strictly a trade journal, devoted to the interests of growers and dealers in nursery stock. It enters a field heretofore unoccupied, and its opportunities for usefulness are practically unlimited. Its purpose will be to serve the interests of a class whose members are widely scattered, and who will therefore find in its columns a means of ready communication with all upon subjects of vital importance to the trade. It will circulate throughout the United States and Canada, and in portions of Europe, among growers and dealers only. Its columns will be open for the discussion of all subjects pertaining to the business, and its aim will be to protect and advance the interests of all nurserymen, in every branch. It will in no sense be the organ of any firm, association, or section of the country. Correspondence from prominent nursery centers, and articles of special or general interest to the trade, are solicited. Suggestions as to features or lines of investigation that will increase the value of the journal to those for whom it is intended, will be thankfully received at any time. It is the aim of the publishers to make the journal useful, attractive, progressive and comprehensive. Neither effort nor expense will be spared to produce these results. We enter the field under the most flattering conditions, and shall strive to maintain the good will which has been so cordially extended from every quarter.

In the succeeding numbers many features will be added. Regular and special departments will be provided; articles from practical nurserymen of national reputation will appear; compilations of valuable matter from various sources of information will be made—in short, the scope of the journal will embrace all that the best of modern thought and experience can produce.

The journal is backed by capital that has placed it at once upon a firm footing and which insures its success from the beginning. The co-operation of all who have the best interests of the trade at heart will make it what has long been needed—a medium through which growers and dealers may offer and receive the benefits of experience, and a thorough knowledge of the wonderful progress of one of the most important industries of the time.

OVERPRODUCTION AND PRICES.

Two subjects are of paramount importance to the nursery trade—prices and the overproduction of stock. Long have the nurserymen of the country been grappling with the problems arising from conditions connected with these subjects, which all efforts have failed satisfactorily to change. Each succeeding season finds the growers endeavoring to dispose of a surplus stock for which there is little or no demand, and the dealers seeking for varieties which are scarce or which have temporarily run out. For some time there has been a feeling among leading nurserymen that the methods of conducting the business in this particular feature might be greatly improved, and several times have there been conferences upon the subject. Indeed the very nature of the conditions which have arisen has driven growers to a mutual discussion of remedial plans. Through lack of organization, however, it was found that little could be accomplished.

The peculiarity of the nursery business, the unusual risks in handling stock, and the necessity for disposing of it promptly, lead many to feel that prices are not what they should be. Expenses have increased largely while prices have not kept pace.

It is for the purpose of opening the subject to general discussion that we publish in another column the views upon these questions by leading nurserymen, whose suggestions will at least command the attention of all, even if opinions differ. THE NATIONAL NURSERYMAN will be pleased to publish the opinions of nurserymen which may be in the way either of an indorsement of the plan proposed in the articles in this issue, or in the way of other plans. Such subjects are of general interest to the trade and heretofore there has been no medium through which an open discussion might be had.

STATE BUREAU OF AGRICULTURE.

Governor Flower has become much interested in the formation of an agricultural bureau of the state. Some time ago, a commission to report on the formation of such a bureau was appointed. Daniel McGoram, Prof. Collin and Senator Linson compose that commission. The Governor is desirous of forming such a bureau so that he can go before the legislature and recommend the appropriation of certain amounts to state and county associations, dairy commissions, etc., feeling confident that the appropriation will go to a responsible head.

With this object in view, the Governor last week invited representative men, including Orlando B. Potter, Nelson Bogue, Hon. John B. Dutcher, George T. Powell and Judson Smith, to meet him and the members of the commission, and express their views on the subject.

This is one of the most important movements of the new year in the line of advancement of horticultural interests in this state. Should it be successful, New York state will lead in the adoption of a system which will doubtless be adopted by other states. Such a bureau could do good work in connection with the national department of agriculture.

WE TAKE pleasure in presenting in this number a photo-engraving and a brief sketch of William C. Barry, who was enthusiastically re-elected President of the Western New York Horticultural Society at the meeting last month. Mr. Barry is eminently fitted to preside over the deliberations of one of the most influential organizations of fruit growers in the country.

MUCH of the success of the meetings of the Western New York Horticultural Society is due to the systematic work of the secretary and treasurer, John Hall, who has become thoroughly identified with the office. Through Mr. Hall's efforts, supplementing those of the president and vice-presidents, the membership of the society has been increased in two years from 200 to 375. Twenty counties of Western New York are represented in the membership. This includes more than a third of the state territory. Secretary Hall says that he hopes to record a membership of 500 at the close of the next annual meeting. Few state societies can report such rapid progress as this. In view of the disappointment resulting from the failure to secure from the state printer a reprint edition of the society's proceedings of 1892, which were burned, Secretary Hall will bend every energy toward the issue of the proceedings of the meeting just closed at the earliest possible date. He expects to have the book in the hands of members and their friends by April 1st at the latest.

THE INTERESTS of horticulturists are intimately associated with those of nurserymen; therefore THE NATIONAL NURSERYMAN will report the proceedings of the horticultural societies of the country, especially those portions of direct interest to the trade.

THE YEAR 1893 will be one of the most important in the history of the nursery business. The interests of nurserymen have become so extensive that public attention is being called to some of the several branches continually. Aside from the exhibits in the horticultural line at the World's Fair, which of themselves will be sufficient to mark an epoch, there will be rapid advancement in the work of the national department of agriculture and the experiment stations, the introduction of new varieties, and the extention of business generally.

LITHOGRAPHERS' ASSOCIATION.

The lithographers of Rochester, Cleveland, Chicago, Detroit and Buffalo have formed "The Lithographers' Association of the Lake District." It was reported that the object was to form a combination to offset the influence of the Association of Lithographers recently formed in New York City. Mr. Fox, of the Rochester Lithographing Company, and Frank A. Stecher, of the Stecher Company, said to a representative of THE NURSERYMAN: "There is no truth in the statement that there has been a combination. We have merely formed an association to advance the interests of the trade."

The officers of the new association are: President, W. J. Morgan, Cleveland; vice-president, Frank A. Stecher, Rochester; secretary and treasurer, G. H. Dunston, Buffalo. An executive committee composed of Thomas Calvert, of Detroit; C. O. Bassett, of Cleveland and M. B. Fox, of Rochester, was appointed.

The organization was effected at a meeting in Cleveland on January 13th. The next meeting will be held in Detroit in April.

The New York association has been of great benefit to its members and the new association hopes for similar results.

Among Growers and Dealers.

Henry Augustine, of Normal, Ill., has just been elected President of the Illinois State Horticultural Society.

Guy Bryant, junior member of the firm of A. Bryant & Sons, Princeton, Ill., passed a portion of the winter in Florida.

T. C. Maxwell and wife, of Geneva, will leave in a short time for the South. Mr. Maxwell has an extensive orange grove near St. Augustine, Fla., which he will visit. He will combine business with pleasure.

The firm of Charles H. Hawks & Co., 419 Ellwanger & Barry Building, this city, has been dissolved by mutual consent, and a reorganization under the name of the Hawks Nursery Company, has been effected.

Lewis Chase, president of Chase Brothers Company, is spending the winter in the South on a pleasure trip to prominent points of interest. He visited recently well-known nurserymen in the Southern States. He is now in Cuba. He will return March 1st.

William Smith, president of the W. & T. Smith Company, Geneva, has just returned from an extended trip through the West. He visited some of the large nurseries in different parts, and reports that the large stock of apples out there will be sold at extremely low prices.

Nelson Bogue, of Batavia, has just been appointed a trustee of the State Institution for the Blind, at Batavia. He was connected with the same institution several years ago. Mr. Bogue says the outlook for the season on all kinds of stock is good. Many of the large growers have made heavy sales already.

Hon. Seth Fenner, of East Aurora, N. Y., one of the largest fruit growers of Erie county, says that there is a prospect for a good crop of fruit in his section this year. The steady cold weather of the winter he believes has kept a normal condition of things, and is much better than alternate cold and warm spells. Last season he got but 15 bushels of apples, including worm-eaten and dried-up specimens from an orchard of 55 acres. There was less than an eighth of a crop of pears.

The W. T. Smith Co., of Geneva, has just completed the construction of a handsome factory building on the corner of Nursery avenue and Lyceum street for the use of the Geneva Optical Co., of which Thomas Smith is president. This corporation is engaged in the manufacture of various kinds of optical goods. It will employ about 400 people, and by its removal to the locality named, has created a market for a large amount of old nursery land in the western suburbs, which is being disposed of very rapidly for building lots.

R. C. Brown, of Brown Brothers Company, this city, has been traveling on the Pacific coast six weeks, and has visited the principal nurseries in that section of the country. He called upon Mr. Chase, at Riverside, Cal., where he saw the largest planting of young orange trees in the country. Chinese labor is employed almost exclusively there, and it was a strange sight compared with scenes in the East to see 200 Chinamen busily at work at the nursery. Mr. Brown has located a branch office of his company at Portland, Oregon, and will remain there a year.

Local growers were interested in the announcement that Irving Rouse, one of the largest, perhaps the largest importer of seedlings in the United States, purchased last month the handsome residence built by William Allen, on Lake avenue, in this city. The residence is one of the finest in the city, and is in a most desirable location. It cost the builder a few years ago $84,500. Mr. Rouse secured it at a cash price of $25,000. This is considered one of the greatest bargains in real estate known in Rochester. Mr. Rouse and his family will move into his new residence next fall.

CORDIAL ENDORSEMENTS.

Below are given a few of the cordial endorsements of the project of THE NATIONAL NURSERYMAN that have come to us voluntarily during the last few weeks:

THOMAS MEEHAN & SONS, GERMANTOWN, PHILA.—"We are very much pleased to receive your circular letter of December 24th, and we shall welcome the new publication, as we believe it will be a most successful work. We have for several years thought that such a medium would not only be desirable, but would be a very profitable undertaking, and we believe that you will receive a great deal of encouragement from it."

S. C. WOOD, KNOWLESVILLE, N. Y.—"I am glad such a journal is to be printed, and I will give it my support."

H. M. WHITING, BOSTON, MASS.—"Am very glad to know that the nurserymen are so fortunate as to have a trade paper, and think it will prove a very valuable source of information."

H. C. GRAVES & SON, LEE'S SUMMIT, MO.—"We have no doubt that if the right people are interested it will be a good thing. We wish you success."

THE STORRS & HARRISON COMPANY, PAINESVILLE, O.—"We wish you success."

THE HOOKER NURSERIES, ROCHESTER, N. Y.—"We should think there was a good field for just such a publication as you propose to issue, and if properly conducted it will be very useful to the nurserymen, as well as profitable to its publishers."

T. S. HUBBARD COMPANY, FREDONIA, N. Y.—"We wish you success in the undertaking and believe such a journal is needed."

SAMUEL C. MOON, MORRISVILLE, PA.—"I have for a long time thought there should be such a journal as you have outlined, and wondered very much that some enterprising person did not arise and supply this conspicuous vacancy in the line of journalism."

PHŒNIX NURSERY COMPANY, BLOOMINGTON, ILL.—"We are of the opinion that a journal of this kind is much needed in the trade, provided it is circulated among what might properly be termed nurserymen, or in other words, growers and dealers, and not planters."

CHASE BROTHERS COMPANY, ROCHESTER, N. Y.—"Referring to your circular letter relative to a publication which you propose to issue within a short time, we must say that we think that a

journal of this sort, properly conducted, would be of immense advantage to the nursery interests of the country, and we should be very glad to see it succeed."

S. M. BAYLES, ST. LOUIS, MO.—"Your circular letter of December 24th is received and noted. A paper devoted exclusively to the nursery business is a move in the right direction."

JOHN CHARLTON, ROCHESTER, N. Y.—"Your circular letter announcing the publication of the NATIONAL NURSERYMAN is received and it gives me great pleasure to accord it my hearty approval. I hope you will make it what has long been needed—an organ of the nursery trade of America. I wish it every success.

L. G. BRAGG & COMPANY, KALAMAZOO, MICH.—"We think a journal of the nature indicated would be a very valuable one for nurserymen."

A. D. PRATT, ROCHESTER, N. Y.—"The establishment of a journal in the interest of the nursery trade in its different branches is an advance in the right direction, and I feel confident it will be cordially received. The nursery business at the present time is large enough and of sufficient importance to demand a trade journal, and will be greatly benefited by one conducted intelligently and practically. I wish you the largest measure of success in your project."

KELSEY & COMPANY, ST. JOSEPH, MO.—"We have been of the opinion for some time that the nursery business was of importance enough to support a trade journal, and we are very much pleased to learn that one is about to be established."

BROWN BROTHERS COMPANY, ROCHESTER, N. Y.—"Such a journal may be made of great value to nurserymen. We have thought for some time that such a journal was needed."

JACKSON & PERKINS, NEWARK, N. Y.—"We think it would be a good thing."

J. T. LOVETT & COMPANY, LITTLE SILVER, N. J.—"A journal vigorously and ably conducted in the field you propose to occupy would be, we think, not only a success financially, but a great help to the trade."

T. V. MUNSON, DENISON, TEX.—"I wish your enterprise every success, and know you will receive all such aid as you may need."

NORTHERN NURSERY COMPANY, TRAER, IA.—"Think the paper you propose starting will be a good thing."

C. R. WATROUS, DES MOINES, IA.—"I wish your new venture abundant success."

AT THE Western New York Horticultural Society meeting, Wm. S. Little and George G. Atwood, the committee appointed to award the Ellwanger prize of $40 for the finest and best maintained private place, with reference to the collection and placing of ornamental trees, shrubs and hardy flowers, reported that Samuel J. Wells, of Fayetteville, was the only entry, and they awarded the prize to him. The committee recommended that no prize should be awarded hereafter unless there shall be two or more competitors. The society adopted the proposition. The report also contained a plea for more entries and for more interest in maintaining beautiful homes in the country.

STERILITY OF HYBRIDS.—It has been known of late that hybrids between species of plants are by no means sterile as generally supposed. On the other hand Mr. G. J. Lowe, who was the earliest, and has been the most persistent experimenter in hybridizing ferns, states that hybrids between these are usually sterile. He has been experimenting since 1855. No other manipulation is required in hybridizing ferns than that spores of two species should be mixed in sowing.—*Meehan's Monthly.*

Some New Varieties.

CHAMPION PEACH.

One of the most popular new peaches on the market is the Champion. It is said to be the earliest freestone peach that is a solid, first-class shipper. The Hoover & Gaines Company, of Dayton, O., are the introducers.

FITZWATER PEAR.

This variety originated on what is known as Homestead Farm, at Himrods, N. Y., near Seneca Lake, fifty years ago. It is of a beautiful canary yellow, of medium size, slightly flushed on one cheek, with a few freckles distributed evenly over the surface, mostly at the calyx. The flesh is juicy and melting to the core, which is small as are also the seeds. It ripens from November to January. It is propagated by the Fitzwater Pear Company, Himrods, N. Y.

VERMONT BEAUTY PEAR.

The frontispiece of this issue illustrates the Vermont Beauty pear, in which there is wide-spread interest. It is a seedling pear, first brought to the notice of Dr. Hoskins, of Newport, Vt., by the originator, J. T. McOmber, Grand Isle, Lake Champlain, and subsequently purchased by W. P. Rupert & Sons, Seneca, N. Y. It has been tested quite extensively in the North and South, and has thus far proved hardy, and also free from the attacks of blight. The tree is a free grower and an abundant bearer. The fruit which ripens a little after the well known Seckel, much excels that variety in size and beauty. The pear is of full medium size, ovate, yellow, and covered on the sunny side with a bright carmine red. The flesh is rich, juicy, and aromatic. It is especially adapted for a dessert pear, and selected lots in the market would bring fancy prices.

WHITE BRANCHING ASTER.

Among the new varieties introduced by James Vick's Sons, is the White Branching Aster, a variety which by its peculiar and valuable characteristics, promises to command the general notice of the trade. The plant is a strong grower and has a marked tendency to form numerous branches. The plant continues to grow very late in the season, and gives its crop late and at a time when there is a scarcity of flowers. The flowers are borne on very long stems and are pure white, being four inches or more in diameter. The petals are broad, long, and many of them more or less twisted and curled in such a manner as to give the blooms the appearance of large, loose and graceful Chrysanthemums. The resemblance is so great that nearly every one would so consider them when seen as cut flowers.

WASHINGTON BOARD OF HORTICULTURE.

The bill before the legislature of the State of Washington, relating to fruit interests, contains the following provisions :

That the board be empowered to select and appoint competent and qualified persons to lecture in each of the districts so created for the purpose of encouraging and improving practical horticulture and imparting instruction in the best methods of treating the diseases of fruit and fruit trees, cleansing orchards and exterminating orchard pests.

That each commissioner be given the power, in his own district, now conferred on the state inspector of fruit pests, and that that office be abolished; making it the commissioner's duty to visit each county of his district at least once a year. Also, that persons selling or distributing nursery stock should be required to procure a certificate from the commissioner of the district where such articles are sold or to be disposed of, stating that such trees or plants appear free from injurious insect pests.

The board asks for an appropriation of $7,500 a year to defray the expenses of the increased work which should be accomplished.

From Various Points.

Immense orchards of peaches, pears and plums are being planted in Central Georgia by N. G. Albaugh, F. G. Withoft and J. H. Hale.

Reports from all sections indicate that the cherry crop of 1892 was a good one where the weather was fair during blossoming time, and that in many places the yield was reduced by rains and damp weather at that critical time.

President O. B. Potter of New York presided at the fifty-third annual meeting of the New York State Agricultural Society, at Albany, January 18th. It was reported that pears were of uneven yield. No profit accrued in grapes, owing to the great amount of mildew. Strawberries were not as plentiful as last year. Cherries rotted badly. Many plum orchards were ruined by black rot. Peaches were a light crop in nearly all sections.

A number of valuable papers were read before the twenty-second annual meeting of the Kansas State Board of Agriculture at Topeka, January 12th. One of the most important subjects presented was the necessity for the establishment of a sub-experiment station in the western part of the state. The altitude of the Manhattan station is less than 1,000 feet, while the counties in the western portion of the state rise to an altitude of nearly 4,000 feet, which materially changes the agricultural conditions. The farmers of Western Kansas are making a noble fight for the redemption of the country from its original state of prairie sod to one of productive fields and fruitful orchards, and they feel that they should receive the aid accorded to others.

Steps are being taken in Geneva to form a corporation with a capital stock of $150,000 for the purpose of manufacturing sugar and syrup from sorghum. Many of the leading nurserymen there are subscribing largely, especially those who have large land interests in and about the town. They will endeavor to push the thing through to a successful end, thus establishing an industry which will not only be profitable in itself, but will open a way to utilize many hundreds of acres of land that has produced trees until rendered unfit for anything except farming purposes, in a way that will be more profitable than growing wheat at seventy-five cents per bushel. The great question seems to be, will the old nursery lands produce good sorghum? Dr. Collier of the State Agricultural Experimental Station thinks they will.

At the meeting of the Iowa State Agricultural Society in Des Moines, January 12th, it was decided to hold a state fair this year, notwithstanding the counter attraction of the World's Fair. Secretary Shaffer's report on fruits stated that it was apparent that the condition of fruit was much lower last year. The average per cent. of crops for the state was 83, of which apples had 64 per cent.; pears, 52; plums. 45; grapes, 85; blackberries. 100; raspberries, 94. and strawberries, 82. Southwest Iowa ranked high in the apple crop, and heavy shipments were made to the eastern market. The total is 249,758 barrels or 665 car loads, or eighty train loads The fruit crop of the United States was damaged not less than $50,000,000 last year by blight, mildew, rot and yellows. Major J. W. McMullen, of Oklaloosa, was re-elected president, and John R. Shaffer, secretary.

At the third annual meeting of the Southern Illinois Horticultural Society valuable papers on apples, pears and gooseberries were read. It was shown that the Ben Davis apple is still in the lead among Southern Illinois orchardists; other favorites are Jonathan, Minkler, Rome Beauty, Willow Twig and Wine-sap. The Aiken apple, a seedling, is rapidly coming to the front in Richland and adjacent counties. The original tree, quite old, is still living near Olney, and bears large crops annually. It is a red apple of excellent quality, a late keeper, but perhaps, by some, considered undersized. Stark Bros., of Louisiana, Mo., are propagating it extensively. The York Imperial and Mammoth Black Twig are coming forward with favorable reports where fruited. In the extreme southern part of the state more attention is paid to early apples. Although the fruit crop was almost a total failure last year, the outlook for continued heavy planting in Illinois is promising. E. G. Mendenhall, of Kinmundy, was elected secretary and treasurer for a third term. The next annual meeting will be held at Belleville, in November.

An unusually large attendance and valuable discussions characterized the twelfth annual meeting of the Colorado State Bureau of Horticulture at Denver, January 12 and 13. Among the papers read was one by W. S. Coburn on "Fruit Culture on the Western Slopes." Mr. Coburn said: Ten years of experience on the western slope has established the fact that there is no better section of the United States for the successful growing of all the fruits of the temperate zone than the three counties of Montrose, Delta, and Mesa. The adaptability of soil and climate are so perfect and the freedom from disease and insects have not only been a great boon to the fruit growers but have enabled them with no extra expense to produce fruit that has no superior and very few equals. I am inclined to the opinion that many of our western planters are making some mistakes in planting largely of a few of the most prolific varieties of the apple without regard to quality, and the few who anticipate this and plant largely for quality will always find a ready market at good prices.

At the annual meeting of the Missouri Horticultural Society it was declared that the varieties of apples best suited to commercial purposes in that section are: Jonathan, Winesap, York Imperial, Minkler, Willow Twig and Ben Davis. The Alberta was pronounced the best peach, six acres of three-year-old trees having produced, last year, a crop which sold for $1,800. The Wild Goose, Louisa and Abundance plums were recommended. It was said that five grains of calomel injected under a cross section of the bark of a pear tree while the sap is running, would cure or prevent blight. It was believed that the state display of fruit at the World's Fair would equal or exceed that of any other state. A car load of apples is in cold storage in Chicago. J. K. Guynn, World's Fair Commissioner for Missouri, reported that the space secured at Chicago for the state's horticultural display is twice as large as that given any other state and in the most desirable location in the building. Two car loads of choice plants and flowers have been sent to be used in embellishing the grounds and verandas of the Missouri building, and Missouri now has a larger display in this line than all the other states combined.

The twenty-third annual meeting of the Michigan Horticultural Society was one of the pleasantest and most profitable in the history of that organization. The spacious court house at Ann Arbor was well filled with members and their friends. There were present several distinguished horticulturists from a distance. Much time was devoted to the consideration of the exhibit at the World's Fair. As there was no member of the State Columbian Commission possessing a recognized acquaintance with or sympathy for horticulture, efforts were made to place the horticultural exhibit in the hands of the state society, as the latter includes in its membership a large proportion of the best horticultural experts of the state. These efforts appeared to be ignored by the Columbian Commission of the state, but before the meeting adjourned an amicable arrangement was effected with the state commission. One of the most interesting papers of the meeting was that read by S. D. Willard, of Geneva, on "Possibilities of Fruit Growing in Michigan." He regards that state as one of the best fruit growing sections of the country, and predicts that farmers there will substitute fruit growing for wheat growing largely in the near future. President James B. Angel of the University of Michigan, in a short address advocated elementary instruction in horticulture in the primary schools of the country, as is the custom in Germany and other countries. A committee consisting of C. J. Monroe, of South Haven, L. B. Rice, of Port Huron, and J. N. Stearns, of Kalamazoo, was appointed to procure the enactment by the legislature of a law preventing the adulteration of fruits. Dr. Erwin Smith of the national agricultural department advocated the destruction of peach trees at the first appearance of the yellows as the only safe method of stopping the spread of the disease. President T. T. Lyon and Secretary E. C. Reid were re-elected.

PLUM KNOT ON ROOTS.

We have never been so forcibly impressed with the value of plants from seeds over plants from cuttings as in the past season in connection with some Marianna plum stocks. This, as is generally known, is a variety of the Myrobolan, which has been valued solely for its supposed freedom from root galls, which it is said is liable to afflict the plum in the southern states, at times. We planted and budded a few that we obtained from the south, and have been amazed to find the roots infested by galls of all sizes—from that of a pea to that of a pigeon's egg. To keep the variety true, it has of course to be raised from cuttings, and it was a new thought to us how much easier it is to extend a trouble like this from any plant raised from cuttings over plants raised from seeds. It was also a new idea to us that the plum knot—black knot as it is technically called—would attack plum roots, though I had last year a specimen of a peach sent me with the "knot" on that, the first instance I ever knew of this trouble afflicting the peach.

I never could understand why one variety of Myrobolan plum should be less free from root galls than another, as a matter of constitutional character, and have taken the exemption of the Marianna to good luck rather than to any special power of resistance. But as long as it was really free, this thought made no practical difference. Every nurseryman is interested in getting the healthiest stock possible, and whether from luck or from special power, it made no difference.

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DEPARTMENT OF AGRICULTURE
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DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., MARCH, 1893. NO. 2.

THE QUESTION OF FREIGHT RATES.

Repeated inquiry has been made to me relative to the new ruling of the various traffic associations, whereby they make it a condition to the shipper who desires the benefit of third class on trees boxed and bulk by car load lots, that they consent to a waiver of all claims for damages from loss of stock, or any loss by detention above an arbitrary valuation of $5 per 100 pounds.

The nurseryman has not been selected from all other shippers as the subject for this ruling, but many other lines that are seeking the benefits of lower rates are compelled to the acceptance of the same conditions, before receiving the benefits. I have no rate sheet before me, or the various lines of freight in the same classification could be given. The reasons for the action of the framers of tariff sheets are not always apparent to the layman, but they have some reason satisfactory to themselves, no doubt, and after all is said and done we have no right to judge off-hand that these discriminations are for selfish gain solely. The average traffic manager has all and more than he can do as a rule these days to meet expenses, maintain equipment, and meet interest on preferred bonds; and we, as nurserymen, have no right to expect better treatment than shippers in other lines. There is a grave question as to their ability to enforce this ruling. A car load of apple trees, weighing 20,000 pounds, would be worth to the shipper as a claim on the railroads, $1,000. A good packer would get 10,000 trees into a car, worth at low wholesale rates, $800. In this case the ruling would not be unjust; whereas, if the car were loaded with 25 cent. pears, the value would be $1,500 in excess of the salvage. With roses, fine ornamentals, new sorts of grapes, etc., the difference in value would be still higher; and as common carriers, they cannot receive your stock for safe carriage, and in case of failure to comply with their contract, settle with you on an arbitrary valuation set by themselves.

Many have referred this matter to me, presumably, as I was to a certain extent the representative of the American Association of Nurserymen in procuring the reduction to third class. To all such I would recommend the use of the Barlow manifold shippers' bill, which, with the use of carbon paper, at one writing, makes triplicate shipping bills, one for the shipper, or consigner, one for the consignee, and the third for the railway company. These blanks have printed upon them (or can be so arranged if in ordering you request them to be so printed) the form of release required by the railway. There will then be no question as to stock going as third class, and in case of a loss in transit, the shipper can consider whether it is desirable to settle on their terms, or test the validity of the enforced contract.

One point is to be borne in mind, namely: That railway men are second to none in the continued improvement of service, and the chances for stock being lost or delayed beyond a reasonable length of time is very much less than formerly. The writer remembers when it was of prime necessity that each important shipment be accompanied from its initial point through to destination by an agent, to ensure seasonable arrival. All this is changed, and the shipper or agent would not be permitted upon the fast freight lines that now handle his goods, almost on passenger and express schedule time. "What can't be cured must be endured," and the average shipper will accept the enforced ruling until some sufficiently important shipment goes astray, to warrant a test case being made, and we will then have the matter settled, and not till then.

S. M. EMERY.

Lake City, Minn.

THE OUTLOOK FOR FRUIT TREES IN ONTARIO.

There is no doubt that the fruit growing industry is being rapidly developed in many parts of Ontario. Of late years grain farming has not been profitable, and farmers are beginning to find, that in order to make any money, it is necessary to cultivate less land with the limited amount of capital at their disposal, to give that land much better cultivation, and to apply fertilizers much more liberally. Some, it is true, are thus led to engage in stock raising, some in vegetable gardening, some in bee keeping, but those who have suitable soil and are favorably situated with regard to markets, are led to engage more and more in the cultivation of both large and small fruits. I will briefly review the various kinds of fruits grown by us in Ontario.

Apple growing is of course the most prominent. If Ontario is becoming famous in the British markets for anything, it is for her apples. It is universally conceded that the farther north an apple can be grown, the higher its color, and the firmer its texture; thus increasing its value, both for transportation, for keeping, or for

sales. The extent to which this industry has already been developed in Ontario may be imagined, when it is known that the estimated yield of apples in all the orchards of Ontario, during the past year, was nearly ten million barrels, a good share of which, however, was needed for home consumption. The central portion of Western Ontario possesses the most favorable conditions for apple growing. The counties of Waterloo, Grey, Simcoe, Wellington, Perth, etc., were especially favored last year with an abundant crop, and buyers from Montreal and Chicago vied with each other in purchasing the excellent produce of apple orchards in that section. Naturally the apple growers in that section are inclined to increase the size of their orchards. The varieties most valued for these parts are the following: Summer, Yellow Transparent, Red Astrachan and Duchess of Oldenburg; autumn, Gravenstein, Colvert and Wealthy; winter, Golden Russet, Ontario, Blenheim Orange, Baldwin and Cranberry Pippin. In the northern parts of this section, Pewaukee and Hubbarston's Nonsuch are much valued. In counties farther north, as in Muskoka, it becomes necessary to plant only the hardier varieties, and while the summer varieties above mentioned are suitable, the hardier Beitigheimer, St. Lawrence and Alexander are favored for the fall, and Pewaukee, Scott's Winter, La Rue and Wealthy for winter. In counties still farther north, as on the borders of the Ottawa, the Alexander, Montreal Peach, Wealthy and Haas are the favorite fall apples, and Talman Sweet, and Edgars' Red Streak are added to the former list of winters. In Southern Ontario, on the border of Lake Erie and the south shore of Lake Ontario, the apple has not succeeded well for some years, owing to the prevalence of fusicladium, a fungus that spots the leaves and fruit to such an extent as to enfeeble the tree and render the fruit almost unsalable. Among the varieties most affected are Early Harvest, Fall Pippin, Rambo, Vandevere, Snow and Esopus Spitzenberg. Unless the effects of using copper mixtures save us from this scourge, the apple orchards of this otherwise most favored portion of Ontario are doomed to be pulled out and burned, root and branch. The north shore of Lake Ontario is more favored, and large quantities of apples, of various sorts, are successfully grown as far east as the city of Kingston.

Pear trees have not been so largely planted until late years, but now that the apple fails so often, many have turned their attention to the growing of this luscious fruit. True, many of our best varieties are too tender to be grown far north, but nearly all kinds succeed in Southern Ontario, and along the shores of Lakes Ontario and Erie. The favorite pear is the Bartlett, but the feeling just now is that this variety is glutting the markets, and that it would be wiser to plant a larger proportion of varieties ripening outside the season of the Bartlett. Pears such as the following are being commended: Beurre Sillard, Doyenne d'Ete, Petite Marguerite, Beurre Bosc, Doyenne Boussock, Duchess, Howell, Sheldon, Triomph de Vienne, Anjou, Dempsey, Lawrence and Winter Nellis.

Plums are being more largely grown every year, and being comparatively hardy, orchards of them are being planted throughout most parts of Western Ontario. What is wanted here by planters is a selection of good productive varieties, of such as have been well tested in New York state, to cover the shipping season. Quite an impulse has been given plum growing in the Niagara district, by the success of a few planters. Here such varieties as Bradshaw, Reine Claude, the Gages, Quackenboss, German Prune, Purple Egg, etc., etc., have been very profitable. The knot is being very vigorously kept down in most places, and an amendment to the act is proposed, which will enable growers to cut it out more vigorously. If this terrible fungus can be kept in subjection, the demand in Ontario for plum trees will soon become very great. In the northern portion only the hardy varieties of the Chickasaw and Americana species are wanted.

Cherry trees are considerably wanted, especially the hardier kinds. The Hearts and Bigarreaus are too uncertain to be of value—but such varieties as the E. Richmond, Montmorency Ordinaire, Windsor, etc., are of great value to us.

LINUS WOOLVERTON.

Grimsby, Ont.

THE NURSERYMAN'S DUTY AS TO NAMES OF FRUITS.

Taking it for granted that the nurserymen who may read this article are sincerely interested in having the names of fruits as simple and as easily understood as possible, I feel a certain degree of confidence in addressing them on the subject. Almost every one knows that there is scarcely a fruit which does not have more than one name, and in some cases as many as twenty of them. It is also true that some of the names are ridiculous in their composition and even very misleading. As eminent a person as Hon. Marshall P. Wilder long ago urged upon the pomologists of the country the necessity of reformation as to the names of fruits. On several occasions others have urged the same thing before public assemblies and in the horticultural papers.

Now the fact is, the nurserymen hold the key to the situation. The names they put upon their catalogues and labels that go out to the public create the popular opinion on the subject. It matters little how much the leading authorities on the subject, or in other words the leading reformers may write and talk, so long as the nurserymen fail to apply the ideas as just suggested. If

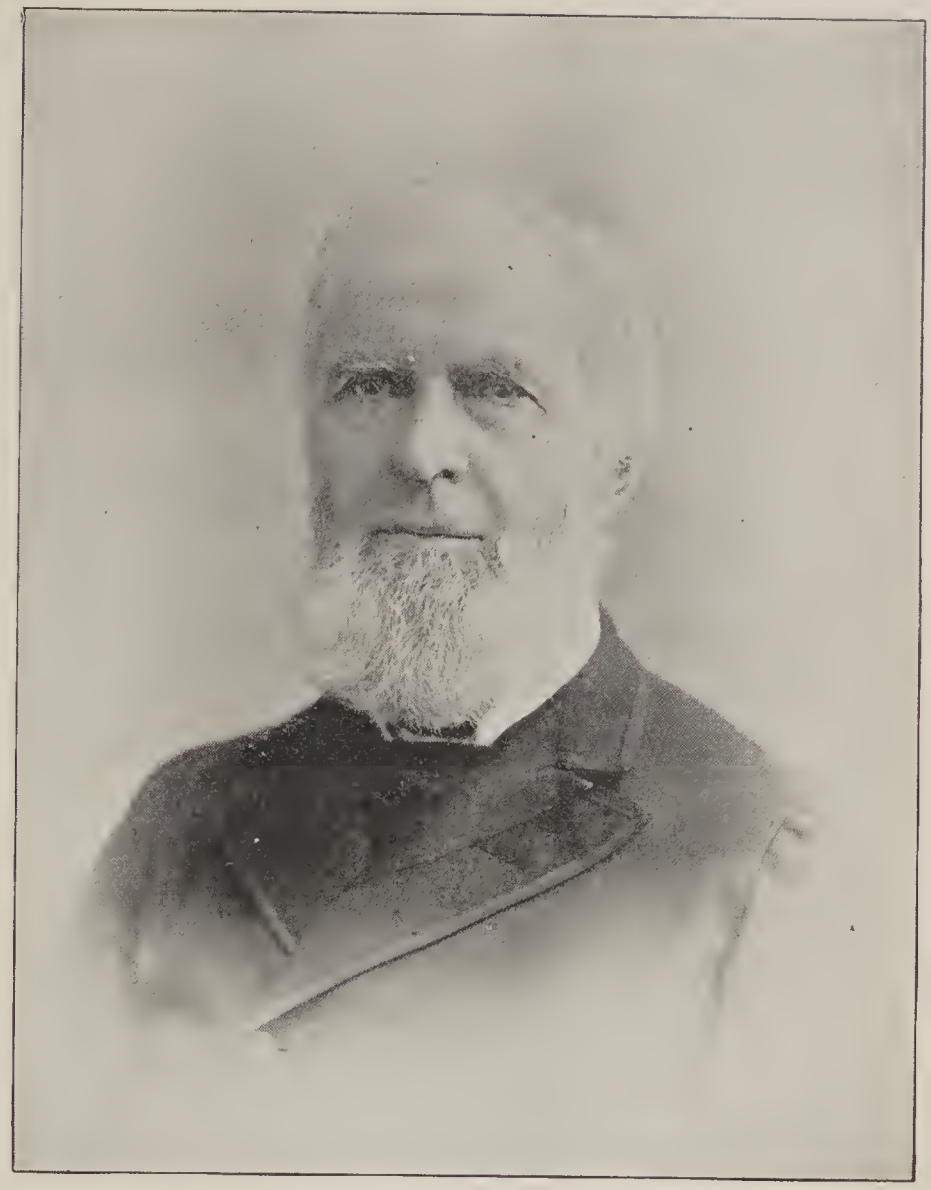
the names of fruits are not what they should be, the blame chiefly lies at their doors. Already a few have endeavored to carry into effect the rules of the American Pomological Society for shortening, simplifying, Anglicizing and making plain the names of our leading fruits. However there is not one, so far as I have been able to see who has completely carried out the idea. The proposed reformation includes the leaving off of all such parts of names as "Beurre," "Pippin," "Favorite," "Pearmain," "Seedling," "Hybrid," and wherever possible "Sweet," the possessive case, and a large list of other superfluous or misleading words. In many cases it may be necessary to follow the recently adopted name with a local synonym or the old name in its former lengthy form in parenthesis, that the reader may be able thoroughly to understand it.

Under my direction we are now preparing in this division a complete list of all the cultivated fruits, giving the true names according to the approved ideas and all the synonyms following them. As the work progresses these lists will be published and thoroughly distributed. It is earnestly desired that nurserymen will see the necessity and the advantages of conforming their catalogues and their tree and plant labels to such a list. The American Pomological Society already has a list that in a great measure conforms to the above ideas and its committee on nomenclature is constantly working to make its list better and better. But as this list does not include many of the newer fruits and those which are of a rather local nature it is not so useful as a more comprehensive one might be.

In many cases nurserymen are called upon to give names to fruits which are just being introduced, and it is at once evident that their minds should be in accordance with the authority just mentioned. If *they* refuse to give fruits long, high-sounding, foolish or misleading names, such names will rarely get before the public. While I do not wish to assume any authority or any undue responsibility in this matter, I will gladly look over with great care, and correct the names of fruits as given in nurserymen's catalogues, provided they are submitted for such purpose. This I am the more willing to do as there seems to be no other, or at least no available official outside the government employ ready to do it. It is certainly in line with the work of this office and as it is virtually a public service it seems proper to do it at public expense. I assure the nurserymen of this country that the department in which I have the honor to be an official, is in sympathy with whatever pertains to the best interests of agriculture and horticulture in this country.

H. E. Van Deman,
Pomologist.
Department of Agriculture.

Washington, D. C.



THOMAS SMITH.

The W. & T. Smith Company, of Geneva, N. Y., shares with the firm of Ellwanger & Barry, of this city, the honor of pioneers in the nursery business in this section. It has developed from small beginnings until it has attained the rank of one of the largest of the kind in the world.

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Mr. Smith is of a retiring disposition. He never entered politics, nor would he accept public office; but he has always had the best interests of his village at heart, and has always been held in the highest esteem.

ON THE PACIFIC SLOPE.

FRUIT CULTURE IN THE GARDEN COUNTRY OF AMERICA—OVER-PRODUCTION OF STOCK BY AMATEUR NURSERYMEN—ERRONEOUS IDEAS REGARDING EASTERN TREES.

On the evening of December 8th, last, I pulled out of my fair home city, Rochester, N. Y., for a trip to the far West. My object was to become more familiar with the Pacific Coast people and country. Doubtless, most of the readers are perfectly familiar with the country, people and nursery trade east of the Rockies, and perhaps many are more familiar even with the Pacific Slope. My few weeks' travel at this season of the year could not afford an opportunity of judging correctly the real merits of the various sections. However, I may speak of what I have seen, and how I have been impressed.

New Mexico is favored in many parts with a delightful climate and rich soil, well adapted to fruit growing. Apples, peaches, pears, plums, grapes, and small fruits do well, but the country will never be developed or improved until the Mexicans are driven out by the enterprising Americans. Irrigation, of course, is necessary, but there are thousands of acres in easy access to water, and sometime that country will be a great fruit producing region. The entire country about Santa Fe is settled by Mexicans, who live in their adobe houses, and are of no more use to a country than the Indian. At and about Albuquerque an eastern market gardener with a few acres of well cultivated ground may be seen. He makes the earth produce the best of everything. At such a place it is not necessary to inquire: "What manner of man is he?" He is known by the way he keeps his grounds. He is an eastern bred man. He also has a splendid young orchard, and everything is well cared for. He is rolling in wealth compared with what he would be had he remained where he was born. It was early spring when I was there and the green vegetables had a particular attraction for me. Garden truck is marketed the whole year round. Arizona is yet only a wild grazing country, but I understand much valuable land for orange growing is rapidly being taken up, and no doubt within a few years many fine oranges will be grown in Arizona. Of course the nurserymen, or even the nursery agent, is but little known in either New Mexico or Arizona, the country being too new for successful work there. But in the next state west, California, the nurserymen have been getting in their work. Everybody with an acre of ground is planting it with trees. This evidently has been so for the past few years, and no matter what variety, so long as it was an orange, fig, lemon, English walnut, olive or almond, it was all right, and as a result there are many naturally poor varieties of fruit in bearing. There has been such a demand for good trees, and this is particularly true of oranges, that the nurserymen having first-class Navel trees for sale are reaping a harvest. From $100 to $125 per hundred is considered a fair price now. Next season they may not be worth half so much. The market is easily "bulled" or "beared." There is, of course, only a limited demand, and it is easy to glut the market. For instance, everybody sees there is a good margin in raising oranges at $1.00 per tree, and, as a result, broken-down lawyers, ministers, doctors and others plant some seeds and go into the nursery business. They have an idea it requires no experience and real knowledge to make money in growing orange trees for sale, and as a result there are hundreds of these little so-called nurseries, and by the time they have their trees ready for sale, they are at a loss to know what to do with them. Everybody has trees for sale, and they cannot dispose of them for what it cost to grow them, unless there is a great demand, as is the case this year. The trouble is they don't understand their business, and start into growing when trees are high, thinking they will always be so. During such years of overproduction of cheap trees it makes it hard for the established nurseryman to maintain fair prices for good trees. I was very favorably impressed with the Riverside country for orange and lemon growing. The groves were actually breaking with their golden fruit; every little twig and limb was covered. A great many fine, big Navel oranges are grown there. The groves along either side of Magnolia avenue for miles were very attractive. I rode across the country between Riverside and Los Angeles, a distance of about seventy-five miles, which is the garden spot of California. The climate is charming. On the way I picked oranges, lemons, some figs and olives, and quantities of tea roses, calla lilies, violets, and many other flowers. The day before Christmas I made myself comfortable in the middle of a big strawberry patch, where grew the largest and best strawberries I ever ate. It may be of interest to know whether strawberries pay. Well, the owner of this patch pointed out to me a piece of two and one-half acres just across the way, in full-bearing strawberries, which he said he had just rented up to July 1, 1893, and for which he paid in gold $250, or a rental of $100 per acre for six months. A farm within a stone's throw containing 80 acres, ordinary buildings, about 70 acres of which was an orange grove, six or seven years old, had just been sold for $75,000. The raisin industry is also important, and much money is being made in all lines of fruit raising.

Up in this Northwest country, apples, pears, prunes, peaches, and all small fruits may be grown successfully. As yet, fruit raising is in a very crude state. Many of the orchards have been badly neglected, and all sorts of insect pests encouraged. A fruit pest bill, which passed the legislature of Oregon this month, provides for a thorough quarantine against imported trees infected with any kind of pests. Also, a bill will doubtless be passed empowering a fruit inspector to take the necessary steps to thoroughly cleanse the trees of pests already here.

Many fruit growers, and even nurserymen, having heard so much about the yellows among the Delaware peaches, have a wrong idea, and believe that all eastern peach trees are diseased, and should be kept out. Steps should be taken to correct this erroneous report. While it is true that Delaware peaches have suffered terribly from the yellows, it should be understood that this state of affairs does not exist in Western New York, and never were healthier trees grown anywhere. Regarding nurserymen, the same may be said of them as in California. There are very few thorough, practical men, but scores of careless, unreliable growers, who don't even know how to bud. In fact, nearly all trees are grafted because it is easier, and most any one can do it. A minister, lawyer, doctor or farmer, is more successful with a graft than with a bud, hence that method is quite popular. It is a conundrum as to what these parties are going to do with their trees this year. Prunes and plums are offered as low as $33 per 1,000 now. Nearly every day we receive letters from such parties inviting us to come and buy them out. They are willing to close their business out at a bargain and forever hold their peace.

I regret that I cannot give your readers a better general idea of the nursery trade at present, but perhaps may have an opportunity to do so when I am more fully posted.

ROBERT C. BROWN.

Portland, Oregon, Feb. 14, 1893.

NEBRASKA NURSERY INTERESTS.

The apple and cherry crop of 1892 was very short owing to the unfavorable weather at blossoming time, but grapes and raspberries yielded very fair returns. Pears are not grown here to any extent on account of the occasional hard winters and the ravages of blight. The indications are that the time is coming when we shall grow very largely of grapes, not only for our own markets, but will ship freely to western and northwestern markets. We are favorably located and have the soil and climate to enable us to grow early varieties of grapes for market in great perfection and profit, and I hope to see the time come in the near future when they will be shipped in car lots. In favorable seasons we grow superior apples in great abundance, orchards of 20, 40 and 80 acres being planted with promise of great profit to the planter. Our apples are of excellent quality and brilliant in color and keep better than those of Kansas and Missouri.

In the timber claim trade which has formed quite a large percentage of the business of the local nurserymen, there is just now a very sharp demand for forest seedlings. With the repeal of the timber claim law, most nurseries greatly lessened and some entirely stopped their production of forest seedlings. There is a demand for wind-breaks and groves over these broad prairies and there is yet some demand for trees to plant on timber claims, which had been cheaply and unsuccessfully carried from year to year by planting seeds. The varieties of timber which are in greatest demand for timber claim purposes are Ash, Box Elder, Black Locust and for farm wind-breaks and groves, Ash, Soft Maple and Catalpa with more or less of other varieties.

All the nurseries of the state report improved prospects for trade. E. F. STEPHENS.

Crete, Neb.

THE CRANDALL CURRANT.

Nothing gives greater pleasure to myself and the trade in general than the introduction of a *new* variety of fruit, when properly introduced by responsible parties who are willing on their reputation to endorse it as being likely to prove of profit and value to the amateur and professional grower. A few years ago, parties in the West introduced a black currant called the Crandall. It was described as being a new (?) variety of great merit, that was likely to become a valuable and profitable sort. I ask for practical information from those who have grown and fruited it, and not hearsay evidence only: What are its merits, or does it possess any; and is there any value to it as being worthy to be recommended to the general public as a new and profitable variety? I, myself, have grown and fruited it, giving it a fair trial, but do not recognize any value in it whatever, and would say in all candor that I do not think it possesses one redeeming feature to recommend it to the public as being worthy of its confidence. I know it has been catalogued, through the desire to offer new varieties, by several parties, who in most instances give hearsay recommendations only, and not the results of their own experience; and I do not for a moment think that anyone with weight or authority would give it the least encouragement on its merits. I know of plants growing wild in our neighborhood which are its very counterpart in every particular, both being in my opinion worthless, and of no value. Let us learn to frown down such worthless introductions as being a fraud and imposition on the public; but give to new varieties of excellence and merit all the aid we can in their introduction and dissemination, as being of profit and worth to the community at large.

JOHN CHARLTON.

Rochester, N. Y.

American Gardening says of the Pratt peach in Niagara County, N. Y.: "It ripens with Crawford Early, has here proved an abundant bearer and is superior in quality. Crawford runs somewhat larger in size, but Pratt is less injured by severe winters. The tree is a strong, healthy grower."

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months.....50
Foreign Subscriptions.....1.25
Six Months.....75

Advertising rates will be sent upon application.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., MARCH, 1893.

THE NEW SECRETARY OF AGRICULTURE.

The appointment by Mr. Cleveland of J. Sterling Morton, of Nebraska, as Secretary of Agriculture, is generally conceded to be an excellent one. Mr. Morton's interest in everything that pertains to trees is well known, and for this reason the nurserymen of the country will be especially pleased. Mr. Morton originated the idea of Arbor Day, which has been adopted in many states. It is owing to his exertions that Nebraska advanced so rapidly in the establishment of artificial groves, now having about 250,000 acres of growing forest and 800,000 planted trees, besides a large area of fruit trees, grape vines, shrubs and minor plants. Already Mr. Morton has announced his intention of preparing suitable national forestry laws for recommendation to Congress. He will receive the support of the forestry organizations of the country. Mr. Morton says that in a generation the present timber supply of the country will be exhausted, unless measures for checking the waste and for planting new trees are promptly adopted.

The good work accomplished by Secretary Rusk in developing the resources of the department from the small beginning of a bureau has shown great possibilities for advancement in the interests of nurserymen, and it is believed that Mr. Morton will take charge with enthusiasm, guided by experience, and will endeavor to keep pace and a little in advance of the wants of those interested in the work of the department.

NECESSITY OF COMBINATION.

The benefits to be derived from a combination of growers in certain localities about the country suggest themselves at once to all who will give the subject thought. There arise continually in connection with a consideration of the subject the obstacles to be overcome in securing unanimity of opinion as to the method by which such a result may be brought about. A prominent nurseryman of Western New York, one whose opinions are sought from all quarters upon various subjects connected with the trade, said recently that the organization could be effected at a meeting of the prominent growers of a section, when those growers had become so thoroughly interested in the project that they could see, not only that it would be desirable, but that it would become a necessity. In the February issue of THE NATIONAL NURSERYMAN, some of the many benefits to be derived from such an organization as is proposed were alluded to. It is evident that within a comparatively short time growers and dealers will be forced to fall back upon some plan along these lines. The drift in that direction is indicated by the formation here and there of small associations for the mutual protection of the members. The discussions of those bodies are limited to measures that will benefit individuals, firms and companies, which are at the same time entering into sharp competition one with the other. The organization that is now proposed is for the purpose of effectually joining the issues of all in a central body, where the interests will be identical, and the line of operation of the members will be in conjunction, instead of in competition with each other. As before stated, one office, one catalogue, one superintendent, foreman or manager, etc., would do the work now done by from twenty to fifty.

The tendency in all trades and occupations is in this direction. Within the last month, the farmers of Western New York, the millers of the northern central states, the grape growers of Central New York, and half a dozen other interests all over the country have formed combinations for the purpose of reducing expenses, restoring prices, and securing concessions to which they are entitled, but which, as individuals, they were unable to obtain. The principle is adopted by municipalities, as seen in boards of trade, chambers of commerce, and similar institutions in which a trade or several trades operate in concerted action.

Said a representative farmer at the recent meeting in this city, when a farmers' organization was effected :

> If the farmers will submit to the system of grading, and let all products go on the markets on their merits, I think there can be little question that the farmers can organize and supply a line of products in the hands of a competent person to sell, which can be sold in the different markets to much better advantage than individual farmers can, who go into the markets with all grades of quality. If the farmers go into an organization of this kind, let them sell every product of their farms according to the established grades, and when we know that our barley is such a grade, and our wheat is such a grade, there will be little trouble in selling it for what it is worth. Just as soon as we can establish this fact, that products are to be sold on their merits, it will be a stimulus to every producer in this country, to put his products in the very best condition.

Attention is called to the views on the subject of a consolidation of interests, by a prominent eastern nurseryman, in another column. He refers in no uncertain

manner to the evils of overproduction and prices, subjects which are very near the heart of every nurseryman. Let others present their views in a similar manner, and accompany them with suggestions as to remedies.

STATE AGRICULTURAL BUREAU.

As the result of conferences between prominent nurserymen and horticulturalists of this state, to which reference was made in our last issue, a commission, appointed for the purpose by Governor Flower, has formulated a bill which has been introduced in the legislature providing for the combination of the various agricultural departments of the state into a main bureau, under the supervision of one head. The law proposes sweeping changes. The commissioner of agriculture shall be the chief of the department. The New York state dairy commissioner shall be the commissioner of agriculture until his successor shall be appointed and qualified. The commissioner of agriculture shall be appointed by the governor, by and with the advice and consent of the Senate. His term of office shall be three years. He shall be paid an annual salary of $5,000 and his necessary expenses incurred in the discharge of his official duties. He may appoint such clerks and assistant commissioners, and employ such clerks, chemists, agents and counsel as he may deem necessary for the proper enforcement of such laws and the proper administration of the department, who shall receive such compensation as may be fixed by him, and their necessary expenses. The power of the commissioner is thus defined: The commissioner of agriculture, his clerks, assistants, experts, chemists, agents and counsel employed by him, shall have full access to all places of business, factories, farms, buildings, carriages, cars and vessels used in the manufacture, sale or transportation within the state of any dairy products or any imitation thereof, or of any article or product with respect to which any authority is conferred by this chapter on said commissioner. They may examine and open any package, can or vessel containing or believed to contain any article or product, which may be manufactured, sold or exposed for sale in violation of the provisions of this chapter, and may inspect the contents therein, and take therefrom samples for analysis. The commissioner of agriculture shall have control of the New York agricultural experiment station, established in the village of Geneva for the purpose of promoting agriculture in its various branches by scientific investigation and experiment. He may appoint a director of the station who shall have the general oversight and management, subject to the commissioner, of the experiments and investigations necessary to accomplish the objects of the station, and hold office during the pleasure of the commissioner. Cornell university is designated as the college within this state, solely entitled to receive the benefits of the act of the Congress of the United States, approved March 2, 1887, entitled "An act to establish agricultural stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and of the acts supplementary thereto."

ATTENTION is called to the expressions of appreciation of THE NATIONAL NURSERYMAN in another column. These were entirely voluntary and they are but a portion of the number received. The unanimous opinion is that there is a wide field of usefulness for such a journal. If you like it will you not send us your subscription at once? Every nurseryman in the country can afford to subscribe. Indeed can any afford not to do so? Can you afford to miss the suggestions and advice of the greatest practical nurserymen of the country based upon experience which covers every branch of the trade and every section of the country, when these are brought to your hands for the nominal sum of one dollar? The journal will be worth much more than that to you. Send us your subscription and interest other nurserymen in our behalf. We will try to do you good, and in whatever way you may patronize us we assure you that your returns will be more than satisfactory.

ADVERTISERS are requested not to name prices in their advertisements. The announcements, "Prices upon Application," "Correspondence Solicited," "Write for Prices," or similar ones will enable all to reach those whom they seek and at the same time will be a fair adjustment of a matter which otherwise would cause much dissatisfaction. Every advertiser will see at once that this regulation of THE NURSERYMAN is just.

SPECIAL attention is called to the brief article by H. E. Van Deman, emphasizing the importance of a standard for the naming of varieties of fruit. This is a question of direct interest to fruit growers. Mr. Van Deman's generous offer to correct the fruit catalogues of the country so far as he may be requested, should receive hearty co-operation upon the part of growers. It is just such movements that tend to unite what will otherwise continue to be a diversity of interests.

COLONEL JOHN A. COCKERILL, the famous journalist of New York City, president of the New York Press Club, in his address at the Chamber of Commerce banquet held in this city on February 17th, said: "Amid the hills of Southern Ohio I first heard of Rochester through the famous saltatorial feat of Samuel Patch. Later an ambitious young uncle, seeking to extend his usefulness, accepted the agency of a Rochester nursery, and, from the beautiful specimen book sent to him, I learned that Rochester could produce the richest strawberries, the reddest apples and the bluest plums of any spot on this

continent. That was one of my early lessons in pictorial art. In time I came to know you through your able and alert press as one of the most progressive cities of the sterling Empire State, fourth in population and importance and second to no city in the union in beauty of location, facility of transportation and breadth of enterprise—a city whose horizon is still radiant with the sunlight of hope. What I shall learn here to-night of your industrial and commercial prosperity will be instructive. Before I depart I hope to know more of your justly famous beer if not of your world-famed flour."

The Colonel was correctly informed regarding the importance of Rochester industries with the exception of his reference to the world-famed flour. Western cities have snatched from Rochester the palm of producing the most and the best flour, and although the seal of the city and its official title retain the name "Flour City," it long ago became the custom to refer to it as the Flower City. It is justly celebrated by reason of its extensive nurseries, and it was not possible for an occasion like that of the Chamber of Commerce banquet to pass without reference to a commercial feature which has made the city famous throughout the world.

CONSOLIDATION OF INTERESTS.

Editor of THE NATIONAL NURSERYMAN:

Your article upon the necessity of consolidation of nursery interests is one which is worthy of consideration by every large nursery concern in the country. While the consolidation of such interests so far as it relates to New York nurseries does not involve others necessarily, in detached sections of the country, yet the general question is one which cannot fail to arouse consideration on the part of those who have large investments in the business. While not in favor of trusts as against the general welfare, the nurserymen of to-day cannot fail to recognize the evil effects of general over-production, and the tendency toward lower prices each successive year until it has become a serious question as to how low prices for stock can be reduced, without involving absolute loss to the producer. All these emphasize most strongly the need of combination, and this necessity is as vital to nurserymen outside of New York State as to any others. The writer has been impressed for a number of years with the abuses within the trade, and their name is legion. They are rapidly deteriorating legitimate business with the retail buyers, and if the process goes on many years longer, retail catalogues will cease to exist and only wholesale prices will prevail. Any large nursery interest is to-day confronted by this question; wholesale lists are freely sent to retail buyers, wholesale nurseries are advertising in all directions to send their lists to those who apply for them, and on every hand we see the retail buyer taking advantage of this cut-throat policy which the nurserymen of to-day are encouraging. Where the abuse is so general, it is impossible for any one nursery interest to combat it. It needs strong co-operation among the nurserymen, and if the leading interests were to combine against this abuse with rigid penalties, a marked improvement would follow in trade conditions. It would seem possible to form some protective alliance among the leading nurserymen of the country, and if the movement could be once crystalized, no doubt its value and importance would be recognized so fully that it would be generally entered into. Other abuses besides the one mentioned could also be prevented. It is remarkable that such a combination and co-operative work has not been before considered. The nursery interests are more or less concrete in shape, and whatever little outside competition might be brought to bear against a combination of this character would have little weight or value. I hope to hear a general discussion of this question, and it is hoped that some conclusive action will be taken by those whose interests are at stake.

A MASSACHUSETTS NURSERYMAN.

FROM GENEVA.

THE NATIONAL NURSERYMAN is a very welcome guest to the nurserymen of Geneva. Its splendid makeup and tasty appearance more than meet the expectation of all. It supplies a need that has long been felt by the trade here.

The growers report a healthy increase in their sales department during the past month; prices are somewhat firmer and "looking up." It is very evident that all the first-class stock in and about Geneva, fit for spring delivery, will find ready market. Several importations of French stock have arrived recently in a frozen condition, much of it being injured to such an extent as to render it worthless.

From present indications the plantings of 1893 will be somewhat smaller than for several years past. Some of the largest growers of apples, pears and plums say that they will not plant over one-half the amount they usually have; others will not vary much from their usual planting; on the whole it is safe to say that the out-put this year will be cut short about one-fourth.

Quite extensive experiments are being carried on at the State Experimental Station this winter, in the preservation of fruits in cold storage; the results obtained thus far have not been as satisfactory as could have been wished, but the many important points gained will prove valuable to fruit growers.

N. C. and Chas. E. Smith, of the firm of E. Smith & Sons, have returned home from La Porte, Texas, where they have been investigating the fruit growing industry. These gentlemen are experts in the business, and speak

in flattering terms of that part of the country as a fruit growing section.

The well-known firm of Bronson & Hopkins has been dissolved by mutual consent. The business of the concern is now being carried on by Mr. Bronson. Mr. Hopkins thinks that twenty-one years as an active nurseryman, justifies him in retiring from the business ; he seems to enjoy his freedom.

Geo. G. Atwood has returned from a business tour through Kentucky and Tennessee.

T. C. and J. I. Maxwell are enjoying a sojourn in the South ; they are harvesting their mammoth orange crop near St. Augustine, Fla.

GLEANINGS FROM THE NOTES OF AN OLD NURSERYMAN.

Under the above heading it is proposed to present some ideas and experiences which have been gleaned by two generations during fifty years of life in a commercial nursery, many of them being gathered from the memoranda of my father, who started his business career by raising a patch of mulberry trees in his father's garden during the great *Morus Multicaulis* excitement, which raged so fiercely in this country for a short period about 1838. While some of these suggestions offered may be so commonplace as to seem superfluous to experienced nurserymen, it is believed that there may be some readers as young and inexperienced as the writers once were, and that to such they may suggest ideas which will enable them to profit by the experience of others.

STRIPPING LEAVES.

The necessity of stripping deciduous trees, which are dug in autumn before the leaves fall off naturally, is recognized by all practical nurserymen, but it is a tedious and expensive operation, the importance of which many inexperienced planters fail to appreciate and sometimes neglect, to their great disadvantage. One of my early lessons in the nursery business was forcibly impressed by the following expensive experience. I had driven about fifteen miles from home to a nursery and bought a load of peach trees. The leaves on them were nearly ready to drop off, requiring but a stroke of the hand to remove them, as fast as the trees could be handled. After striping a part of the load it was found that if we waited to finish them it would make us too late to meet the last trip of the ferry boat, and we could not get home that night. It was therefore concluded to take the balance of them home with the leaves on, and strip them the next morning, thinking that a delay of a few hours would not make any material difference. But imagine my surprise the next morning to find that the leaves which in the evening had been almost ready to drop off, now held so tightly that they could scarcely be pulled off without injuring the buds. The following spring I was still more surprised to find that the trees which had been stripped when dug had wintered well and were sound to the tips ; but on those which held their leaves till morning, the branches were shriveled and many of them dead. I had learned the importance of stripping a tree before it is dug, or as quickly as possible after it is out of the ground, because the large evaporating surface exposed by the leaves continues to drain the tree of its sap and life until it is entirely withered.

Another lesson was learned in connection with some Viburnum Plicatum, which were dug early to fill one of the first orders sent out in the fall, at the request of a Rochester nursery firm which "must have its stock at once" to enable it to commence packing on a certain date. The young growth was not thoroughly ripened, but the plants were stripped and packed very carefully, and shipped as ordered. Very soon there came a complaint saying that they arrived in bad condition, and were unsalable. Knowing that the order had been filled with fine stock, I could scarcely credit such a complaint, and ordered the plants back to satisfy myself what the difficulty was. On examination I found a sorry looking lot of plants, with tops dead, and black half way down. Two such experiences with Viburnum Plicatum have satisfied me that the plant does not submit readily to such unnatural conditions, and should not be dug until the wood is well matured. They have also helped to confirm the opinion that very early fall stripping is, as a rule, decidedly disadvantageous, and should be discouraged, as much loss and disappointment are annually occasioned through imprudence in this particular.

SAMUEL C. MOON.

Morrisville, Pa.

MANAGEMENT OF PEACH SEED.

After twenty-five years experience in the management of peach seed, I have adopted the following method as being the most satisfactory: Stratify the seed in the cellar any time before the middle of February, using moist sand. About the middle of April screen from the sand, crack those that are not open, and picking out the meats, place them in about ten times their bulk of sifted sand, containing sufficient moisture to prevent the meats from shriveling, and put them in a cool place. When ready to plant, about the 1st of May, the sprouts will commence to show on all good seed, insuring a perfect stand if well planted in suitable soil.

S. C. WOOD.

Knowlesville, N. Y.

William C. Barry visited the greenhouses of New York florists last week. He reports that great preparations are being made for the Easter season.

Among Growers and Dealers.

Irving Rouse was in Indiana a portion of last month.

George A. Sweet, of Dansville, has been in Kansas a few weeks.

J. I. Newson, has sold a fourth interest in the Commercial Nurseries, Nashville, Tenn., to his son, A. W. Newson.

D. N. Graves, of the firm of H. C. Graves & Son, Council Bluffs, Ia., has been in the South a portion of the winter on business.

The Amityville Nursery and Greenhouse Company has been formed at Amityville, Suffolk County, N. Y., with a capital stock of $25,000. P. H. Foster is president, and G. P. Williams secretary. They are importers and growers, and make landscape gardening a specialty. Mr. Foster is a well-known nurseryman of Babylon, N. Y.

George C. Brackett, of Lawrence, Kansas, secretary of the Kansas Horticultural Society, has been appointed by the Royal Society of Agriculture and of Botany one of the jurors to serve at the Thirteenth International Exposition, in England, opening April 16, but on account of ill health he will not attend. He may go to the Pacific coast instead.

Manager E. K. Jennings, of the Blue Mound Nurseries, Kansas, offers for sale a nursery of national reputation, known as the Cook & Irwin nursery, established in 1868. The nursery is said to be in first-class condition. It offers an opportunity for an enterprising nurseryman to take advantage of the progressive business of the West.

We had the pleasure, lately, of calling upon Col. W. R. Stuart, of Ocean Springs, Miss., the "Father of Pecan Culture." The Colonel is a typical Southern gentleman; courteous, hospitable, and as enthusiastic in his work as a young man, although he is now over 73 years old. We found him in his young pecan orchard superintending the work of planting some grafted sorts which originated on his grounds. The Stuart, named for him by Mr. Van Deman, we think the ideal sort, and we paid a handsome price for a few trees to propagate from. Judging from what we saw there, pecans bear transplanting from the nursery to the orchard with much better success than we supposed, very few having died from those transplanted last year.—*Practical Nurseryman.*

One of the best known importers in this country is C. H. Joosten, the representative of the Boskoop, Holland, Nursery Association. He is enthusiastic over the value of Fostite, a copper sulphated soap stone powder which has been found efficacious in dealing with all cryptogamic diseases of plants and fruit trees. Aside from the fact that the importation of this substance is a source of considerable revenue, it should be a matter of congratulation to all that what has been proved to be a valuable remedy for mildew, black rot and blight, in European countries, has been introduced to a large extent in this country with increasing favor. Too much encouragement cannot be given to efforts to prevent and cure the diseases and effects of insects, which destroy or decrease to an alarming extent the profits of the nurseryman, horticulturist and florist.

A RARE OPPORTUNITY.

Just at this season of the year when nurserymen are looking about for means of disposing of surplus stock, a rare opportunity is offered them in the advertising columns of THE NATIONAL NURSERYMAN. This journal circulates among the growers and dealers of the country, going directly to the men it is desired to reach, and at rates below the cost of circulars and postage, to say nothing of time required. Several have spoken of the great advantage the journal offers for the publication of lists of surplus stock.

Here is an opportunity, too, to present in the most attractive manner the claims of specialties, novelties, new varieties, as they appear, by illustration and description. Few, if any trades, have as handsome a journal representing them. The nursery business offers opportunities in this direction unsurpassed. The demand for advertising space in the April number is already encroaching upon our limits. If you would be in it we should hear from you within a few days.

The Hooker Nursery Company say:

"We have had in answer to our advertisement in your journal inquiries from nurserymen of high standing whom we had never heard from before."

A. L. Wood says:

"I have through my advertisement in THE NATIONAL NURSERYMAN sold all my stock of certain kinds, and I am looking for more stock to fill orders which are coming in as they never have before. Your journal is a wonderful advertising medium. Its attractive appearance is a credit to every advertiser."

John Charlton:

"I have received in answer to my advertisement in your journal inquiries from many nurserymen whom I never dealt with before."

The opportunity to fill shortages on stock is one that cannot be overlooked by all live nurserymen. The Hooker Nursery Company say they have been obliged to replace the want list in their advertisement with other matter, because they have secured through its first appearance all the stock asked for. Brown Bros. Company say the advertising columns of this journal will be a great help to the nurserymen who desire to fill on "longs and shorts" and do away with the sending of circulars and the attendant expense; that they prefer to advertise their lists in THE NATIONAL NURSERYMAN, rather than use the old custom of circulars, which has long been considered too expensive.

From Various Points.

The Central New York Grape Grower's Union of Penn Yan was incorporated February 9, 1893, to market and ship fruit in Yates, Steuben, Ontario, Seneca and Schuyler counties. Capital $10,000. Directors, H. O. Fairchild, T. M. Moore, R. Longwell, Hammondsport; E. Brown, Bluff Point, and others.

Governor Flower, on February 22d, made the following appointments as trustees of the New York State Experimental Station: Philip N. Nichols, of Geneva; Adrian Tuttle, of Watkins; William C. Barry, of Rochester; George F. Mills, of Fonda, and Charles Jones, of Geneseo (reappointments); Wm. D. Barnes, of Middlehope, vice Gerritt S. Miller, term expired; Van Buren Ames, of Pottsdam, vice James McCann, term expired; and Lyman D. Olney, of Rutland, vice Daniel Bachelor, term expired.

The Horticultural Association of Alvin, Texas, has petitioned the legislature of that state for the establishment of an experimental station at Alvin. The memorial calls attention to the great advance being made by that section in the growing of fruits and vegetables, and the rapid increasing population drawn there for the purpose of further developing the varied resources of the Texas gulf coast. One acre has yielded nearly one thousand dollars worth of strawberries. Fruits, vegetables and flowers, and some of the more tropical fruits, so far as have been tried, do well there. It is thought that an experimental station at that place would assist in the development of South Texas into the greatest fruit, vegetable and flower-growing country in America.

At the twenty-sixth annual meeting of the Kansas Horticultural Society, it was the general opinion that old orchards in Kansas are unmistakably declining, and that it is imperatively necessary that new orchards should be planted. It was belived that a Kansas orchard twenty years old had outlived its usefulness. The reports from counties showed that apples had failed, and cherries and pears did little, and small fruits in some sections were successful; grapes were fair. William Cutter, speaking of the propagation of nursery stock, showed two-year-old trees grown by several methods of grafting, such as whole-root, crown graft, first cut, second, third and fourth cut, long scions and with roots upside down. The point particularly under discussion was the comparative value of whole-root grafts. The society decided unanimously in favor of short section grafting. U. B. Pearsall, of the committee on nurseries said that the present stock of apple trees in the state was short and of poor quality. He reported that the same was true of other states.

W. S. Chase, writing from Redlands, California, to the Allegan (Mich.) *Gazette*, says:—"Both growers and shippers are getting pretty well organized, and if our Michigan fruit growers could organize and work in harmony as well as they do here I think they would profit by it in matters of transportation. There is the nicest crop of oranges now ripening on the trees I ever saw. The Navel variety especially are extra. The trees have to be propped to keep them from breaking with their loads of fruit. Many of the grape men are digging out their vines and setting the orange, olive, lemon, and prune. Nurserymen are not reaping the harvest from their stock of trees they did. Trees are plenty this winter. The orange, one-year-old bud on two-year-old stock, is selling for 50c. to 75c. per tree for first-class stock. The same sold at $1 one year ago and $2 two years ago. Peach, apricot, and nectarine, about 25c. to 30c. each. I brought with me 200 sugar-maple trees and some Niagara grape vines. The maples are one and two years old from the seed. I set them in nursery and have been caring for them. They are now leaving out—some have leaves nearly full size. The vines, too, seem to think it is spring and are getting down to business. There are no maple trees in the country that I can learn of, but I shall see how they will do here."

AS OTHERS SEE US.

Following are a few of the many letters that have come to us since the issue of the first number of THE NATIONAL NURSERYMAN; they evince a cordial welcome and the unanimous opinion that the journal will fill a place too long vacant.

L. L. MAY & CO., ST. PAUL, MINN.—"Your first number is very neat and creditable, and with the hearty support of all nurserymen in the country, it should become a valuable medium for the exchange of ideas, as well as for advertising."

C. H. JOOSTEN, NEW YORK CITY.—"The first number of THE NATIONAL NURSERYMAN is at hand. I am highly pleased with its neat appearance and high-class literature. Judging by the large list of prominent advertisers, the success of your enterprise seems to be guaranteed. A long-felt want will be supplied. Long life to THE NATIONAL NURSERYMAN."

J. VANLINDLEY, POMONA HILL NURSERIES, POMONA, N. C.—"I have received Vol. I, No. 1, of THE NATIONAL NURSERYMAN, and am well pleased with it. I am glad to see just such a publication. It is well gotten up, and looks at first sight like a first-class publication. I send $1.00 for subscription. I wish you much success."

E. W. ROBERTSON, PIEDMONT NURSERIES, CROZET, VA.—"The sample copy of THE NATIONAL NURSERYMAN received. Please accept thanks for giving me an opportunity to subscribe to so valuable a journal. Enclosed find my check for $1.00 for one year's subscription. The journal will fill a long-felt want. Every nurseryman on the continent should subscribe, whether their business is large or small."

THOMAS MEEHAN, GERMANTOWN, PHILA., PA.—"We are pleased with the first number; it is gotten up nicely, printed well, and is a credit to the nursery trade. We have no doubt but what it will be a success. The quantity of advertisements you have got certainly makes its future look prosperous. Such a paper has been needed for a long time and we wish you success."

HOOKER NURSERY COMPANY, ROCHESTER, N. Y.—"We are much pleased with the first number of THE NATIONAL NURSERYMAN. It is a credit to the trade."

CHASE BROTHERS COMPANY, ROCHESTER, N.Y.—"Your first number is very handsome, and contains matter of interest to all nurserymen. We wish you success. The new journal is just what was needed."

BROWN BROTHERS COMPANY, ROCHESTER, N. Y.—"We are proud to see that the trade is to have so handsome and meritorious a journal. It is what has long been needed, and we are sure it will succeed."

ELLWANGER & BARRY, ROCHESTER, N. Y.—"The first number of THE NATIONAL NURSERYMAN is a very handsome production. We are much pleased with it."

THEODORE J. SMITH, W. & T. SMITH COMPANY, GENEVA, N.Y.—"Allow me to congratulate you on the first appearance of THE NATIONAL NURSERYMAN. It reflects credit on the editors and does honor to the trade."

WILEY & COMPANY, CAYUGA, N. Y.—"We are in receipt of the first copy of THE NATIONAL NURSERYMAN. We are delighted with it. We had no idea you were to get up such an admirable journal. It will certainly make a place for itself. Its very appearance will urge its strongest possible claim for attention."

P. E. VANDENBURG & CO., JERSEYVILLE NURSERIES, JERSEYVILLE, ILL.—"Why have you not started the paper years ago? All kinds of business have their trade paper. Why not the nurserymen? I wish you success."

S. C. WOOD, LONG BRIDGE NURSERIES, KNOWLESVILLE, N. Y.—"I am much pleased with the first number of the journal."

James MacPherson,

. . . . . Landscape Gardener,

328 West State St., Trenton, N. J.

Advice for the Private Garden and Greenhouse. Grouping of trees, shrubs and herbaceous plants in sequence for colleges. Special displays and hardy flower shows arranged for nurserymen.

OVER **1,000 TREES!**

VARIETIES OF

—NEW and RARE, OLD and RELIABLE.—

Both Fruit and Ornamental. **ROSES,** Vines, Clematis, Rhododendrons, etc. Send stamp for illustrated Catalogues, also Wholesale List. Address

COMMERCIAL NURSERIES. | **W. S. LITTLE & CO., ROCHESTER, N. Y.**

Superior First-class 2 and 3 year Stock.

Standard Pears and Plums a Specialty.

John Carey, West Brighton Nurseries,

Located ½ mile South of 12 Corners, off Monroe Ave.

P. O. Address, Rochester, N. Y.



1838. 55 YEARS. 300 ACRES. 1893.

NUT TREES AND NEW PEARS. PARRY'S GIANT, PEDIGREE JAPAN MAMMOTH, PARAGON, and other Chestnuts. Japan, Persian, French and English Walnuts, Pecans, Almonds and Filberts. LINCOLN CORELESS PEAR—very large and very late. SENECA—large, handsome and immediately after Bartletts. Japan Golden Russet, Vermont Beauty and Idaho, in collections at reduced rates. Eleagnus Longipes, Hardy Oranges, Wineberries and other valuable novelties. Shade Trees for lawn or street, Ornamental Shrubs, Vines, Small Fruit Plants. Immense stock Maples and Poplars for street planting. Illustrated descriptive catalogue free. WILLIAM PARRY.

POMONA NURSERIES. Parry, New Jersey.



The Green Mountain Grape.

The Seventh Year's Trial of this WONDERFUL GRAPE more than sustains all that has been said of it in the past. The most desirable hardy out-door early grape known. Send for free circular giving full information A full line of other Nursery Stock.

Address **STEPHEN HOYT'S SONS, New Canaan, Conn.**



Confidential to Nurserymen:

We are prepared to fill orders for **SEEDS, FLOWERING PLANTS AND SMALL FRUITS** on short notice. For years it has been our practice to pack these goods for many of the leading Nurserymen. On receiving their tags, we pack each sale separate in blank wrappers, without our name or advertising matter attached, and ship to the different parties. In VICK'S FLORAL GUIDE for 1893, will be found many attractive novelties in Hardy Plants, &c., &c.

We Call Especial Attention to the Large Flowering Hibiscus, the grandest of the Clematis Family; Clematis Paniculata. Late in Summer this vine is covered with a mass of beautiful white flowers; very fragrant and a rapid grower. . . . . .

NEW DWARF CALLAS.

NEW BLIGHT-PROOF POTATOES, Maggie Murphy and American Wonder,

Elegant Hardy Climbing Dutchman's Pipe. Striped Rose, Vick's Caprice.

Many other novelties will be found in VICK'S FLORAL GUIDE for 1893, called the "Poet's Number," because on every page are appropriate quotations from prominent authors. It will give us pleasure to send both Wholesale and Retail Catalogues **free,** upon application.

JAMES VICK'S SONS, ROCHESTER, N. Y.



NURSERY LANDS IN THE GENESEE VALLEY AT

DANSVILLE, N. Y.

The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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DEPARTMENT OF AGRICULTURE RECEIVED U.S. DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., APRIL, 1893. NO. 3.

DANSVILLE.

ONE OF THE GREATEST NURSERY CENTERS OF THE WORLD—TWELVE HUNDRED ACRES IN STOCK—FIFTY-FIVE GROWERS AT WORK—THE RICH VALLEY LANDS COVERED WITH YOUNG TREES—GROWTH OF THE BUSINESS DURING A PERIOD OF THIRTY-EIGHT YEARS.

In the heart of the fertile valley of the Genesee, distant but 45 miles from the great nursery centers of Rochester and Geneva and equalling or exceeding them in extent of nursery area, lies Dansville, the temporary home of many a convalescent and of many a promising scion of fruit or ornamental stock. Climate, soil and water have combined to make the place famous for nursery purposes—the sanatorium for nursing back to health, through its water cure, hundreds who have tried other means in vain; the sandy loam for propagating to great advantage standard trees and shrubs. The sanatorium and the nurseries are the mainstay of the village, which was incorporated May 7, 1845, and which in 1860 had a population of 2,879. It is now credited with 5,000. In 1855 O. B. Maxwell, a brother of Joshua Maxwell of Geneva, started the first nursery in Dansville. Joshua and Henry Maxwell went to Dansville, and becoming convinced that the soil and climate were well adapted to the growing of nursery stock, made experiments which resulted satisfactorily. They returned to Geneva and O. B. Maxwell located at Dansville. Soon after, John Murphy, Hamilton Southwick and Dr. Farley engaged in the nursery business there. These were the principal nurserymen in Dansville down to the time of the war. After the war A. D. Pratt now of Rochester, and E. H. Pratt now of Fredonia, formed a partnership with Mr. Maxwell, the firm being known as Maxwell, Pratt & Co. From that time on the business has increased rapidly and a number of others have engaged in it. Among the more prominent growers are: Bryant Brothers, Edward Bacon, M. Burke & Son, James P. Callahan, E. P. Clark, James Douds, The F. E. Williams Nursery Company, John Galbraith, F. M. Hartman, Hartman & Rouse, T. Kennedy & Sons, George E. Kern, M. King, C. F. McNair & Co., F. J. & M. J. McNeil, J. B. Morey & Son, E. D. Morrison, J. D. Murphy, A. J. Murphy, George M. Pitstock, W. F. Pfuntner, G. C. Stone, George A. Sweet, Jacob Uhl, G. W. Whitney & Co. There are as many more who are growers to a comparatively small extent. The whole number of growers is 55. Besides these, outside firms are directly interested in Dansville. Nelson Bogue of Batavia is growing some there and The H. E. Hooker Company of Rochester, is growing stock there on shares and is having some grown for it especially.

A careful estimate recently made, of the amount of nursery stock in Dansville is 1,200 acres, putting it on a par in this respect with Geneva which has been supposed by many to have a larger acreage. It is stated that for the last 5 or 6 years the acreage in Dansville has equalled that of Geneva. It has ranged during that time between 1,000 and 1,200. The largest grower in Dansville is George A. Sweet who has 125 acres in nursery stock. The next largest is J. B. Morey who has 75 acres. T. Kennedy & Sons have about 75 acres and C. F. McNair & Co., have 50 acres. The others range from this figure down to 5, 3 and even 1 acre.

Most of the stock in Dansville comprises the staple fruits. Especially is this the case with the smaller growers. They plant in small blocks a few of the leading varieties. Little ornamental stock is grown aside from that produced by Mr. Sweet. He grows from three to five times as much ornamental stock as any other firm there.

Dansville is full of young stock and although most of the available stock will be disposed of this season, the poor prices and the prospect of little or no demand for the stock that is coming on makes the growers there feel anything but hopeful. Dansville possesses grand opportunities for producing stock. The sandy loam of the valley has proved to be all that was expected of it for the purpose and the climate is favorable. The land in the valley is nearly all occupied and growers have extended their blocks to the sides of the hills which here are 600 to 800 feet above the valley. Mr. Sweet has 40 or 50 acres on the table-land on top of the hills. To the South Mr. Stone has found a sandy soil on an elevation where he has grown peaches with considerable success; a general assortment. Dansville nurserymen have had greatest success with apples, though they grow pears, plums and cherries to a considerable extent. Many of the small dealers sell to the larger ones. There are vineyards on the hillsides to which considerable attention is paid, with profit.

One of the most popular nurserymen of Dansville has just accepted a lucrative offer which takes him from the village. J. B. Morey, Jr., left two weeks ago for Huntsville, Alabama, to take charge of the planting and growing department of the large nursery recently established there by Chase Brothers Company of Rochester. That firm purchased 1,000 acres near Huntsville at $19 per acre, and already 300 acres of it have been planted. Two

cousins of Mr. Chase superintend the nursery. The opening is a promising one for Mr. Morey who, although but 25 years of age, understands thoroughly every branch of the business. He has practically conducted his father's business for a number of years, having started when he was 16. He was one of the most popular young men of the place as was proven by his election last month to the office of president of the village, a republican in a democratic town. Mr. Morey has another son, 16 years of age, who will step in and assist his father in filling the place thus vacated.

That the nurserymen of Dansville are alive to their own interests is shown by the fact that they have an association which meets monthly to discuss subjects connected with the business. One of the principal benefits derived from the association is the circulation of lists of stock on hand. It was found that the growers were sending to other points for stock to complete orders when the very thing could have been procured in Dansville, had it been known. These lists are prepared by all the members quarterly.

The transportation facilities of Dansville are not what they should be. One of the slowest roads in the country is the Dansville & Mt. Morris, connecting with the D. L. & W., and the W. N. Y. & P. R. R. There has been difficulty in overcoming the delay at Buffalo in the case of west bound stock. It is believed that the Erie will run into Dansville by May 1st, and that facilities for both travel and traffic will be greatly increased thereby.

GOOD APPLE TREES.

There has been a great deal of printed matter on the subject of root-grafted and budded apple trees, and naturally that great power of civilization, the newspapers throughout the United States, have been glad to print anything that has the spice of a point in controversy.

If we could feel that the writers who take sides on this important issue were doing their best to produce for their customers nothing but the best trees, we should think that some favorable advance were made in this branch of the business, but we are inclined to read between the lines and observe that many pursue a course which is the most profitable for them, or one that they are compelled to follow because of unfavorable conditions of soil or climate.

With this preliminary, I submit the statement, that with favorable conditions, *a good tree is a good tree, wherever and however produced.* A root-grafted apple tree, produced on a light prairie soil, is not likely to be good, neither is a budded tree, grown on a wet clay soil. A budded tree on a prairie loam is better than a grafted tree on prairie loam, because it produces more fibrous roots, most of which will be removed with the tree at transplanting. A budded tree and a grafted tree produced on the thoroughly well drained lands of Western New York are trees of equal quality.

If the above statements are true, and I believe no one East or West will take exception to them, then the question is not one of grafting or of budding, but climate, soil, culture and pruning. How many times have we noticed that a block of trees that is good from the start continues so to the time it is sold, and as many times have we seen a lot that has not started favorably labored over without good results, everything in its history working adversely and without a final profit of good trees. Good trees can be produced by using healthy, thrifty seedlings. If grafted, then only selected scions shall be used. Suitable soil thoroughly drained, not with the idea of removing surplus water, but for the purpose of making the soil porous, pliable and areated, so it will retain moisture to react promptly after the cultivator, and be a suitable medium for the development of roots of the young trees, is essential. Early cultivation and anything that will assist an early growth in the young block will put it in the best shape to stand the trying ordeal of the first winter of its history. It is well known that the black-hearted trees of many localities are produced by very cold weather, on the late growing trees at the time the tree is one-year-old—the one-year-old growth being the future body of the tree. This is the critical time. If the young trees can be carried through this first winter in a sound condition the future of the block is assured. The dry falls of Western New York have matured its trees so that they stand what cold we have without injury, hence it is impossible to find unsound wood in its apple trees. The reverse of this is true in many localities, young nurseries having been wiped out by late fall growth and destructive climatic influences. Removing too many leaves in the growing season to make the body smoother, too early pruning before the coldest weather is past, and too late trimming after the growth has begun, all contribute causes of injury that should be avoided in the production of good trees.

The papers that are written to prove that budded trees are superior to grafted trees have emanated from sources where it is not usual to get in grafted trees a satisfactory system of roots, and diagrams have been lithographed, showing good budded trees and poor grafted ones to prove the point.

Properly grown grafted trees on suitable apple soil produce a satisfactory system of roots, abundant in fibre and strength of character that will compare favorably with the very best budded trees that can be produced anywhere, and it is a knowledge of these facts that causes us to commend good grafted trees as strongly as we would condemn poor budded trees.

Geneva, N. Y. GEORGE G. ATWOOD.

A PLEA FOR THE FOREST TREE.

ITS SUPERIORITY FOR STREET ORNAMENTATION—ITS PREPARATION A SOURCE OF GREAT REVENUE TO NURSERYMEN—PLANTERS MUST BE EDUCATED AS TO ITS VALUE—SUGGESTIONS AS TO VARIETIES—NOTABLE EXAMPLES OF WHAT MAY BE ACCOMPLISHED.

In reply to the question "What are the best kinds of trees for streets?" I will mention first, the Tulip tree as standing at the head of all our native trees, not only as an ornamental but as a clean tree.

The prevailing characteristics of all street trees should be, first, stateliness; second, cleanliness; that is, freedom from insects; third, vigorous growth; fourth, attractive foliage; all of which the Tulip tree possesses in an eminent degree. The next best tree that I now mention is the Magnolia Acuminata or Cucumber tree, which possesses all the good qualities of the Tulip tree. Why these noble trees have been neglected so much by planters would seem strange were it not for the fact that unless they are taken when young and transplanted two or three times, planters in general do not succeed with them as well as they do with more fibrous rooted trees like Maples and Elms which are considered standard trees for streets; but there is no comparison between them for stateliness and cleanliness, and I predict that the nurseryman who would take in hand the preparation of trees for street planting would not only find plenty of custom for his superior trees but he would get double and treble the prices that are now asked for the ordinary ones. The price of a tree cannot always be estimated by its size, especially in this case, for it is quality that rules, and if more attention were paid to the raising of suitable trees for avenue planting we should have a better display of our native trees. This, however, is a subject that requires a great deal of forethought on the part of the amateur planter, and the advice of the nurseryman is usually sought. A nurseryman's business is to raise trees and sell them in the best market, and those that grow quickly and with the least trouble are generally the most profitable and such as are sometimes recommended; but they are not usually the ones that give most satisfaction to the planter. As long as people ask for those trees the nurserymen will furnish them. But as amateur planters come to understand the subject better, the nature of trees and their adaptation to the purposes required, there will be a better understanding between the buyer and the nurseryman and a demand will be created for certain trees that the nurseryman must supply. Suppose a man has some property to develop by opening new streets in a town or city which he desires to plant with trees and having but little knowledge himself of the subject, instead of going to some reputable nurseryman and stating his wants, should do as many others have done and are still doing, select his trees indiscriminately from the forest without any regard to the kinds or their adaptation to the purposes intended, and were to have them planted in deep, narrow holes, the trees having but few roots would struggle perhaps for a few years with scarcely any perceptible sign of growth. In such cases failure must inevitably result. When amateur planters are giving their orders to nurserymen if they would insist upon having trees that have been properly prepared, and will accept, no others, such demands will create a plentiful supply, but the purchaser must bear in mind that he will have to pay an extra price for all such trees.

There are some kinds of trees, as Elms and Maples, that can be planted directly from the nursery-rows and that will do well enough, but such trees as Magnolias, Tulip trees and Oaks must be transplanted two or three times in the nursery before their removal to the streets. The trees that are planted on the Paris boulevards have to be transplanted two or three times before they are set out on the streets, and they are for the most part Sycamores and Elms. If our planters in general would pay more attention to our finer kinds of forest trees than to Horse Chestnuts and European Lindens, and would use a fair proportion of the various kinds of Oaks, the Magnolia Acuminata, Tulip trees, Black and White Walnuts and the European Cut-leaved Weeping Birch, the monotony of Maples and Elms would be relieved. The Overcup Oak is a beautiful tree growing to a height of over 60 feet, with fine head which is laden with dark tufted foliage. The Rock Chestnut Oak is also a beautiful ornamental tree and when planted in good soil rises with a straight columnar trunk. It has a symmetrical head with large dentriculate leaves. The Pin Oak is a graceful tree and a very thrifty one, with long, drooping branches and light, elegant foliage. The Black Walnut is a most desirable tree for avenues. It is majestic in appearance, growing from 60 to 70 feet in height, with a trunk from 3 to 4 feet in diameter, with horizontal branches extending into a dense, massive head. The Butternut is also useful as an avenue tree but it does not grow either to the height or size of the Black Walnut. It is a beautiful tree when young and grows rapidly. The European Cut-leaved Weeping Birch is one of the most beautiful trees for avenues. It is graceful in habit, clean and bright in appearance. The delicacy of its branches and lightness of its foliage contrast beautifully with that of heavier growing trees. The American Elm and the Maples are universally planted for street trees. I would recommend the planting of intermediate trees only on special occasions, where an immediate effect is to be produced. These intermediate trees should be rooted out when the principals approach suitable size. The Box Elder, Carolina Poplar, Magnolia, the Laurel-leaved Willow and Evergreens may be used with good effect for intermediate trees.

The time is coming when the nurseryman will be able

to fill orders for from 100 to 1,000 well-prepared trees for street and avenue planting at three, four and five dollars apiece and with satisfaction to the buyer. People who do not understand the necessity for growing trees for special purposes should be informed of the care and expense required. Our forests are rapidly being devastated. In the great Cumberland mountain region the forest trees may be seen at their best. The hardwood forests of the valleys and table-lands of the Cumberland mountains extend over an area of 4,000 square miles with a stand of timber running from 6,000 to 14,000 feet, board measure, to the acre. The lumber produced in 1885 from Oak and Tulip trees by 805 sawmills was valued at $4,889,196. Nashville is the great hardwood market of the state. The Black Walnut, Ash, Tulip, Elm and Maple received in that market in 1887 amounted to 300,000,000 feet, and the amount shipped in that year was valued at $80,000,000.

The magnificent trees on the avenues of the great European capitals show what may be accomplished here with our own native forest trees in the course of time, if proper selections are made at the start. One of the finest blocks of young Tulip trees I have ever seen was in the nurseries of the Frost Brothers, in this city. These gentlemen understand their value as an avenue tree. Another case in point is that of Messrs. Ellwanger & Barry, who in 1848 procured seeds of the big trees of California and raised a large number of young trees. As they could not find a ready market for them here the most of them were sent to nurserymen in England and France who sold them to owners of fine estates. Those which were retained are growing in the nursery in this city. As fine specimens can not be seen outside of California. In California the tree was simply called the big tree; in England it was called the Wellingtonia Gigantea and in this country for a time it was known as the Washingtonia. Finally it was named Sequoia Gigantea, after the Cherokee chief, Sequoia. In 1853 Mr. Lobb, a British collector, sent some specimens from California to England, but the Mt. Hope nursery trees in this city antedate them by about five years.

WILLIAM WEBSTER,
Rochester N. Y. Landscape Architect.

IN THIS COUNTRY there is no netting manufactured for the covering of cherry and like trees as a protection against birds and insects. In Europe they manufacture a netting for this special purpose, and manufacture it very cheaply. The Iowa station the past year imported 1,500 square yards of this English netting, which cost in that country only one cent per square yard. That was the factory price, and the cost of transportation was one-half cent more per square yard. That netting is very durable and will be used at the station grounds over grape-vines and many other kinds of fruits. The netting is made with different sized meshes.

THE OUTLOOK IN ILLINOIS.

ORCHARD CULTURE MUST SUPPLANT WHEAT GROWING IN MANY SECTIONS—TWICE AS MUCH FRUIT SHOULD BE USED IN HOME MARKETS AS THEY NOW DEMAND—ADVANTAGES OF MODERN CULTURE—A GOOD CROP PROMISED WITH A FAVORABLE SPRING.

Secretary A. C. Hammond of the Illinois Horticultural Society in a recent address before the Warsaw Society said: "We are often asked by farmers and others interested in fruit culture: 'Is it wise in view of the experience of the last decade to plant orchards either for profit or family use?' 'Can I not,' sometimes asks the discouraged farmer, "supply my family with fruit grown in a more favored land cheaper than I can grow it in this climate of such extremes of heat and cold?" "While it is true that cold, droughts, insects and fungi sometimes destroy the crop and injure the trees, it is equally true that we can grow an ample supply for the family nine years out ot ten, and it is none the less true that if it is not grown on the farm the family will not have it to use. To illustrate this, let me ask how many members of this society have used one-tenth as many apples this winter as they would have done if they had had the usual supply of home grown fruit in their cellars? It is well to bear in mind that these failures are not confined alone to fruit growing. Some 30 years ago a drought cut off the hay crop and burned up the pastures. A few years later a frost about the 20th of August destroyed the corn crop, and even if regular crops were assured I think all will agree with me when I say that the grower suffers a loss of 20 cents on every bushel sold at the present prices." 'But,' says the farmer, 'this depression is only temporary, and the usual prices will soon prevail again.' "This proposition may be fairly questioned. The great Northwest, with its cheap lands and fields of thousands of acres, where the cultivation, harvesting and threshing can be done cheaply, is pouring into the markets of the world a mighty stream, while the distant Orient, Egypt, India and the islands of the sea, with their pauper labor, can produce, and by means of the Suez Canal and the improved means of transportation, lay down this staple in the markets of Europe cheaper than we can. If it is a fact that we are losing our place among the wheat growing sections of the world, and I think it will scarcely be questioned, I know of no industry that will so well take its place as growing orchard fruits.

"At least twice as many apples, pears, peaches and plums should be used in the home markets as they now demand, and with refrigerator cars, cold storage ships and rapid transit these fruits can be shipped to the ends of the earth. This, in connection with the various methods of evaporating, canning, preserving and the improved methods of manufacturing jellies, fruits, juices, cider and vinegar, will always insure a market. The young horticulturist of to-day may and should profit

by the experience of the last 40 years and escape many of the failures of his fathers. We now know that 90 per cent of the apples planted by these pioneers are worthless, and that but half a dozen of the long list of pears they supposed to be profitable are worth planting; also that a few varieties like the Keiffer, Seckel, Tyson and some of the new sorts are practically blight proof under proper management, and that this fine fruit can be grown very cheaply. Peach growing is now under a cloud and it may not be wise to plant largely in this latitude, but every planter should have a few trees, and even with our present varieties we get fruit enough to more than pay for planting. But there are several new sorts now being introduced that seem to have the power to endure 5 or 10 degrees of cold more than the ordinary kinds. The Crosbey, a native of Connecticut, and the Champion, a native of this state, seem to have great power of resistance. Last fall at the state fair I saw two seedlings from Logan county that were of superior quality, large size and fine appearance, that are said to be hardy, and the fact of their producing such fine specimens last year seems to indicate their value. They, as well as all other promising new fruits that can be found, are being tested in our horticultural experiment stations.

"The native plum is our most hardy fruit in both tree and bud, as well as the most productive. But it reached its best 20 years ago, on account of the curculio and fungus diseases that attacked it, but we have now learned that arsenical poisons and sulphate of copper are remedies, if not positive specifics, for those difficulties, and we may now plant with the assurance of gathering a harvest. As with peaches, some very promising new seedlings have lately come to the front, and several of the Japanese varieties promise to be valuable. These new sorts, if they prove to be as good as they now appear to be, will revolutionize plum growing in this latitude. What has been said of plums will also apply to cherries. Spray carefully and the worms—larva or curculio—will not be found. My conclusions are that it is safe to plant all the orchard fruits for commercial purposes if the right varieties are selected and carefully cultivated, and proper attention given to the trees.

"But what is the prospect for the approaching season? Last year when our fruit trees were nearly defoliated by fungus attacks, a great many orchardists supposed that the injury was so great that if the trees ever recovered they would not produce fruit the coming year; but as they had no crop to ripen and the fall was favorable they ripened up their wood fairly well and were abundantly furnished with fruit buds; and if the spring is favorable I know of no reason why we may not have a good crop. Apple trees and the ground beneath them are undoubtedly covered with fungus spores, and if the spring should be wet they may again destroy the leaves and fruit as last season, unless an effort is made to kill them. If the trees and ground are sprayed, before the leaves appear, with a strong solution of sulphate of copper—one pound to one hundred gallons of water may be used—most of the spores will be killed. Pears, plums and cherries are apparently in good condition and promise a full crop. Peaches have enough live buds for a full yield, and I think it safe to conclude that the outlook is fairly good."

KNOTS ON MARIANNA ROOTS.

In reply to the article in the February number of THE NATIONAL NURSERYMAN, by Thomas Meehan, of Germantown, Philadelphia, on the discovery of knots on Marianna plum stocks obtained from the South, W. F. Heikes, of Huntsville. Alabama, says:

"Such a report, if not refuted, would effect an undeserved injury to the reputation of the Marianna as a stock. The knots on the roots of plants received from Georgia, reported by this correspondent, have no relation to the 'Black Knot', but are caused by an insect or some peculiar condition of the soil in some parts of Georgia. There are spots in the soil, sometimes a few acres in a hundred acres, in which the roots of peach trees and plum trees are affected with galls. The fibrous roots of young peach trees growing in such spots are sometimes strung like beads with thousands of these galls, the size of peas and larger. Trees or plants grown in very sandy soil are most subject to these 'knots'. It should be explained that only a small proportion of the land in Georgia is productive of these galls, and this only in spots, which may be avoided. Plants grown from seeds on these spots are just as liable to be affected as plants grown from cuttings. We are the largest growers of plums on Marianna stocks North or South, and we have never seen a sign of a gall or knot in our nurseries—evidence sufficient that the cause of the galls is not inherent in the Marianna."

IN REPLY to an inquiry, Chief J. M. Samuels of the Department of Horticulture at the World's Columbian Exposition said, regarding nursery exhibits, that the following firms have engaged space in the west end of Midway Plaisance, which will be devoted to these exhibits: Geo. Pinney, of Wisconsin; Robert Douglas & Son, Sol. Stahl, J. C. Vaughan, of Illinois; R. L. Moore, T. S. Hubbard & Co., Ellwanger & Barry, of New York; the W. H. Moon Co., and Dingee & Conard, of Pa.; U. B. Pearsall, of Kansas; Davis & Co., of Maryland; G. W. Stover, La.; T. V. Munson, of Texas; Nanz & Neuner and J. S Downer & Sons, of Kentucky; G. W. Ford, and the California Nursery Company, of California. Some of the exhibits are in place.

A JUNE FLOWER SHOW IN THE PINETUM.

In many sub-tropical and temperate regions various seasons are marked by extraordinary local developments of color. The Scotch Highlands are purple with Heather in autumn; the meadows of Eastern England are purple with countless thousands of purple Orchis in spring. Later on the woods are sheeted with the blue of the Wild Hyacinth and the commons are golden with Furze. Australia is golden with the Wattle Acacias, the mountains of India are scarlet with whole forests of Rhododendron Arboreum, or golden with Hypericum, and the forests in the wet season purple with millions of the tall spikes of Calanthe Masuca, reminding one of the English Foxglove in size and coloring. Our own country has its seasonable displays of Viola, Phlox, Golden-rod, Gayfeather, Dogwood, Rhododendron and perhaps more beautiful and impressive, some of its immense Western New York apple orchards seen in full bloom from the opposite sides of the valleys. It is only rarely that nature mixes more than two or three primary colors, but the variations of tint are far greater than is often supposed, especially in the tropics where in some species it is difficult to find two individuals alike.

In the selection of trees and shrubs given below the prevailing tints are very decidedly purple and white with a light blue, clear pink, bright yellow or scarlet occasionally. Artists hold, I believe, that yellow and pink are antagonistic, but let me assure them that the single pink Hawthorn and the yellow Laburnum make a charming group, and I have seen a bright pink Ophrys growing beneath and among bright yellow Hypericums in large quantity, which I would well like to see again. Yet yellows should be used with discrimination, and usually deep in the bays rather than in the foreground. With this care it is not easy to err in the disposition of the following material so far as its color enters into the scheme. It is in the combination and intersection of the herbaceous plants in the round beds that the experimenter will find his greatest interest. In such combinations as Trollius Europeus and Viola cucculata, V. cucculata alba and Silene Pennsylvanica, Polemoniums and Sedum acre, Lilium tenuifolium and Lysimachia, the disposition of Tradescantias, Iris, Spireas, Silenes, Phlox, Papavers, Pæonias, Funkias, Hemerocallis, Campanulas, Armerias, and the host of other June bloomers among herbaceous plants the planter will find much to tax his taste, ingenuity and knowledge. Generally the arrangement should be of two kinds to a bed, either intersected or with a tall kind in the center, and a lower one for the edge.

The flowering trees and shrubs employed are as follows: Aesculus hippocastanum, fl. pl. rubicunda, Azalea Ghent, mollis, vars, nudiflora, Chionanthus retusus, virginicus, Coronilla emerus, Cornus alternifolia, florida, fl. rosea, Cytisus laburnum, Calycanthus, Deutzia gracilis, Daphne, Fraxinus ornus, Genista scoparia, Halesia diptera, Meehanii, Leucothoss Catesleyii, Ligustrum ovalifolia, Lonicera Albertii and others, Magnolia Lennei, Soulangeana macrophylla, hypoleuca, &c., Paulownia Imperialis, Pæonia, moutan vars. Philadelphus coronarius, grandiflorus, &c., Pyrus coronaria, aucuparia, Prunus serotina, padus, Virginiana, demissa, Rhododendron vars, of Catawbiense. Of these there are fifty, perhaps sixty, well tried varieties which are hardy to the limits of the species, or even it would seem beyond those limits, Styrax Japonica, Obassia, Spirea corymbosa, trilobata, Van Houttei, Reevesiana, Thunbergii, &c. Sambucus aurea, Syringa Persica vars, vulgaris vars, Tamarix Africana, Viburnum plicatum, macrocephalum and others, Wiegelias and Xanthoceras sorbifolia. Beside these which occur alphabetically in the lists of most good nurseries there are the variegated Tulip tree and the Pink-flowered Locust Decaisneana. By the bye, I once saw three young trees of a Pink-flowered Locust in a hedge-row between Geneva and Canandaigua, N. Y., which did not seem to be R. Decaisneana. Do the Geneva nurserymen know them?

Then among shrubs and climbers are the roses—better perhaps in a garden by themselves. There are Rhus, Cytisus, Ceanothus, Symphoricarpus, Berberis, Cotoneaster, Kalmia, some of the Wistarias and probably some others which I do not think of. Enough are mentioned however to show how fine a flower show may be arranged with hardy trees, shrubs and herbaceous plants.

Trenton, N. J. JAMES MACPHERSON.

COMMERCIAL GREENHOUSES.

In an interesting article on the construction of commercial greenhouses, in *American Gardening*, Professor S. L. Maynard, of the Massachusetts Agricultural College, says: "The cost of constructing a house is very little, if any, more than the cost of the sashes, mats, shutters and frames for the same area of hotbeds. The first cost of heating apparatus will be more but in the end it is far more economical, and the comfort and economy of doing the work, together with the perfect control which the heater gives over all conditions for the growth of crops forced in winter, render these forcing-houses much more satisfactory and profitable than hotbeds. The prevailing idea in building forcing-houses has been to obtain the greatest amount of light possible by cheap and durable construction. The typical New England forcing-house is generally built with a low, flat roof, 30 feet wide, the front wall being from three to four feet high and the back wall 12 to 15 feet. The roof consists of sash-bars supported by purlins resting on common gas-pipes from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches in diameter. The foundation is often made of concrete or even of chestnut posts set in

the ground. The foundation of concrete is made of half hydraulic cement and half sand, mixed into a soft, paste-like consistency and poured into frames of plank arranged so as to give the proper form. Before the cement is set small stones should be thrown into it and tramped down a little. In this concrete, bolts which are to pass through the sills are often imbedded to hold them in place. Perfectly fresh cement and sharp sand must be used; when properly put together this wall is durable. The lumber now used for constructing glass-houses is largely cypress, it being worked into the desired form for sills, plates, posts, sash-bars, etc., at factories. The sash-bars have on their sides grooves or gutters to catch the drip from the glass inside. All the wood-work is primed over with white lead paint before working, and again as soon as it is put together, and all joints are thoroughly filled with the same paint.

The glass is imbedded in putty made one-half or one-third white lead, and is held in place by large zinc points or common picture frame brads. As soon as the glass is laid all of the wood-work is thoroughly painted inside and out. Most of the glass used is No. 2 double-thick, bedded in putty and lapped at the joints about $\frac{1}{8}$ of an inch, but the use of the Gasser zinc strip, which makes a perfectly tight house, is very satisfactory. In this method the glass is butted together and lies flat on the sash-bar, is more firmly and easily fixed in place, requires much less putty, and is not so likely to be loosened by the action of frost. Butting the panes of glass and filling the spaces between them with white lead has been tried and found very satisfactory. If the lead will remain between the joints for two years and not allow any more drip than glass butted with zinc strips does, and this seems likely, this method should supersede the old one of lapping the glass. Ventilation is obtained by hinging sashes in the roof and on the upright sides. The sashes of the roof shut down upon the sash-bars, and are easily raised or shut down at all times without sticking. The ventilating sashes are opened by an arm attachment fastened to the gas-pipe rods, and are moved by different kinds of lifting apparatus. Very few new houses are heated with the old four inch hot water pipes. Most of them have small pipes for steam or hot water. The flow-pipes are ranged high along the central portion of the house, and the returns, of smaller size, in stacks along the sides. For general purposes, except possibly in very large establishments, hot water will be more satisfactory than steam for heating purposes, although the latter may be of some advantage in the growth of certain kinds of crops. The beds for growing crops are on the ground level or raised slightly above it, or sometimes the walk is next the wall, and the whole central part of the house is devoted to crops.''

Among recent callers on Rochester nurserymen was H. M. Whiting, of Boston.



WILLIAM E. ROSSNEY.

The West has made rapid strides in the nursery business as in all branches of trade, and with the marked progress have come into prominence many young men who not long ago left their homes in the East to seek fortunes in new fields. One of the most notable examples of success in this direction is the subject of this sketch, William E. Rossney, president of the Phœnix Nursery Company, at Bloomington, Ill.

Mr. Rossney is a young man but by his untiring energy and devotion to business he has reached a position which ordinarily comes only to those who have spent many years in attaining it. Fifteen years ago Mr. Rossney was a book-keeper in the office of Frost Brothers in this city. At that time Frank K. Phœnix was conducting in Bloomington a nursery business of large proportions, which not long afterward came into the possession of Sidney Tuttle. Twelve years ago Mr. Tuttle while on an eastern trip engaged Mr. Rossney as book-keeper. Henry C. Frost told Mr. Rossney there was opportunity for him to rise rapidly in the new location. Subsequent events showed how the young man improved the opportunity. He has risen from the position of book-keeper to membership in the company and finally to the general management of one of the largest nursery businesses in one of the most prominent points in the country.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance	$1.00
Six Months	.50
Foreign Subscriptions	1.25
Six Months	.75

Advertising rates will be sent upon application.

Entered in the Post-Office at Rochester, N Y., as second class matter.

ROCHESTER, N. Y., APRIL, 1893.

STATE OF TRADE.

The spring of 1893 finds the growers viewing with apprehension the overproduction of stock of standard varieties, and consequent low prices. The peculiarities of the nursery business make it impossible to hold stock for a better market, and therefore there has been the usual distribution, but at prices that leave little profit, when the exigencies of the business are considered. The country has been flooded with cheap stock and the conservative, honest grower has found that the shrewdest management has failed to produce the measure of success he had reason to expect. Indeed, the question has been resolved into one of how to get through with the least loss. Most growers are unable to see how a change for the better is to come, although, of course, such a change is expected. The relief may come in the fall when it is possible there will be shortages on some varieties in certain sections. A prominent nurseryman of this city said last week: "There is no doubt of a depressing state of trade throughout the country, but I am of the opinion that the matter will adjust itself. Nurserymen will not go to the expense repeatedly of producing that for which there is no demand. There are indications that $33\frac{1}{3}$ per cent. less stock will be grown this spring, and that next spring there will be still less. It is hardly likely that many on this account will undertake in certain sections to grow heavily and run the risk of failing to dispose of their stock."

THE TIME IS FAVORABLE.

There is little doubt that within a comparatively short time some means for overcoming the causes that continue to hold prices at a low point will be devised. Leading growers see the necessity for action and are discussing measures. Those who are far-seeing are taking the initiative, but it is difficult to bring others to act. It is seen easily that the small growers who have entered the business merely on account of its attractions as a side issue, and without depending upon it in the least for a livelihood, have produced a result which is difficult to overcome. The small growers suddenly feel panicky and do not see how they are going to pull through without loss. Consequently they unload on the market at once at very low prices and the larger growers are forced to sell under them if they sell at all. Then there is a reaction. Large and small growers have disposed of their stock, and before a supply can be had again, there is an excessive demand which puts prices at a high notch, but leaves the grower helpless. Thus the retailer and the planter suffer, while an adjustment of the disposition of stock would regulate the supply and demand.

It is just here that a consolidation of growers would effect a remedy. Assume that the larger growers of a section comprising several nursery centers form a consolidation and appoint twenty of the leading men an executive committee. Let it be agreed that purchases shall be made on the judgment of one man in each of those centers. Then go into the market and buy for the next year standard pears at 9 cents, or as cheap as possible, and so on, agreeing to use up the surplus. In this way the larger grower could sustain his own stock and the other could be divided at cost, offering it to the members before it is offered outside. It would not take great capital to buy up the stock, which could be secured on long time. In many cases $1,000 would purchase all in a single center. The small dealer cannot long continue to sell the cream of his standard stock at ruinous prices and he would welcome an opportunity to be relieved. If necessary the combination could afford to burn much of the surplus thus acquired. A forfeit for non-compliance with the agreement between the members would ensure the success of the plan.

At all events the time is more favorable than it has been for such a movement, because the rank and file of the nurserymen have reached a point where they find they cannot live at the prices that are ruling; and that is the frame of mind in which a man is ready to try something else.

INSPECTION OF NURSERY STOCK.

Nothing was heard at the last session of Congress from Congressman Caminetti of California regarding a bill requiring an inspection of all nursery stock in every state in the Union. Last year when such a bill was presented the movement was headed off by the determined opposition of the growers.

The State of Washington has joined California in the adoption of stringent laws for the inspection and disinfecting of all stock shipped there from other states.

Such a measure is proper enough, but a compulsory inspection affecting the nursery trade of the entire country, practically putting a check on the progress of the business by measures so severe that they would hold even the employees of railroad companies responsible, if stock that was not in every way perfect was accepted for transportation, would injure a business which is of national importance, and which if left to adjust itself in these matters, will demonstrate that only the responsible growers and dealers will command the confidence of purchasers in every section. If certain states on the Pacific coast fear that they will be imposed upon, it is within their province to protect themselves as they see fit. The nursery business of the country should be allowed to proceed untrammeled by unnecessary and impracticable legislation, however well intended.

On this subject *American Gardening* says: "Has a state the right to quarantine nursery stock for the purpose of keeping out the evils?" Certainly, but it must distinguish between those evils which can be kept out and those which cannot. Some pests, plant lice, apple-worm, apple-scab are so numerous, so small and so widespread that quarantine is impossible. The only preventive is to prohibit the cultivation of the plants upon which they live. And then, these things do not spread upon nursery stock alone, but come with the development of the orchard. They are necessary evils wherever fruit is grown, and when the orchards spread to new regions they soon follow. The law can say that a man shall not harbor them, but that he shall not allow them to spread over the state line—that is absurd. You can not quarantine the wind, the rain or the plant lice. But visible troubles confined to certain areas, these can be quarantined. Yet the time may not have come for circumspect laws for the control of most insects and diseases. Perhaps it never will come, except for a few such evils as the black-knot, the peach yellows and the gypsy-moth. The enactment and enforcement of law depends upon the intelligence and enterprise of the people, and when this general intelligence comes it is not unlikely that public sentiment will be as beneficial as formal laws."

THE ANNUAL MEETING of the American Association of Nurserymen will be held in Chicago on June 7th. It is believed that the added attractions of the World's Fair this year will cause the attendance to be larger than ever, especially as the meeting place is so centrally located. It has been decided to prepare a list of papers to be read and present this to the members after assembling, the programme to be then arranged. This will be the most important meeting of nurserymen of the year, and no member of the association can afford to miss it.

THE DIVISION OF POMOLOGY of the United States Department of Agriculture is working with a full force under the direction of H. E. Van Deman, pomologist, on the revision of the lists of fruits, giving them the proper names. Mr. Van Deman hopes during the summer to be able to issue the apple list upon which the division has been working two years. It has been thought unwise to publish any list with the numerous synonyms unless sufficient time and labor have been expended to bring them down to date. Nurserymen may depend upon a valuable acquisition to the literature in their interests when these lists are out.

WITH THE OPENING of new tracts for building purposes and the laying out of park lands, features of public and private enterprise which are becoming more and more prominent, the demand for ornamental nursery stock will increase rapidly. There is doubtless considerable of interest and it may be of profit in the article in this number by William Webster on the propagation of native forest trees for street planting. If, as he argues, advanced prices could be obtained readily for such stock, there seems little doubt that the field will be occupied. The efforts of forestry associations in many cases extend from the preservation of wooded lands to the planting of trees in groves and rows in barren places, and such improvements of course are of direct interest to the wide-awake nurseryman. Superintendent William S. McMillan of the Buffalo park system recently called attention to the success achieved in planting pine and larch in Scotland, where a plantation set out fifty years ago has for twenty years been furnishing timber for England and the continent.

RETAIL TRADE AS A FIELD FOR COMBINATION.

To the Editor of THE NATIONAL NURSERYMAN:

The articles published in THE NATIONAL NURSERYMAN looking to a consolidation of nursery interests, has led the writer to review certain movements on the part of the retail trade, during the past five or seven years, calculated to promote the interests of all employers of agents in this business.

The result has been, we think it can be safely said in each case, that the greedy, near-sighted ones in the pool or association overbalance the square, level-headed ones, and the result has been that the greedy ones have benefited by such pooling or combination of rates, while the few that lived up to the rules and regulations of such combine suffered equal to the gain of the rogues. So that it would seem thus far, the average retailer of stock is too greedy, jealous, fearing that some one will get ahead of him in some way, to join hands and "keep hold" on small issues.

We refer above principally to the repeated efforts to establish a uniform amount of commission to be paid canvassers for the first month; the establishing of a permanent dead beat list of agents, etc. The majority of

the jumpers over the traces are known, and if they have materially gained by it, it must be in some other source than the increase of their retail business. There is no good, sound reason, why a uniform rate of compensation to new men should not be agreed upon and lived up to, and to the benefit of all retailers, with no back action, rebate attachment, leading an agent to believe a big offer would be made at the end of the month or so, and same be paid from start. We know of parties in the retail trade who are offering the outside limit of commission to new men, and what is more, offering to pay it all down, weekly. The business will not warrant it. Every one with a competent bookkeeper knows it. We presume it is out of sheer desperation, as they are for the most part doing a "Tom Thumb" business.

The matter of a list of dead-beat agents, to be revised and published monthly, is also a thing no one could afford to be without, if names are properly reported—only proper names handed in for such lists, etc. But here is where the "greedy rogue" gets in his work again. He has a row perhaps with one of his good men, and cannot consistently put him to work again, or he may wish to make him "toe the mark" on some matter, and to prevent his securing work of another house, or another house employing him, he will publish such agent in the dead beat list, when in reality he is a safe man to employ. There are lots of cranky, hard agents to get satisfactory work out of; parenthetically we might add, that there are lots of cranks employing and handling salesmen.

Imagine, if you can, the army of canvassers employed by the retailers, the amount of money and work involved in securing them, and the pains and patience it requires to keep them in line. Where is there a better field for combination, united action, living up to such by-laws as an association might adopt? We dare say the editor will kindly give space for replies to above points, either by sincere advocates of these measures, or by those who wish to come into the fold and again kick over the traces. A few remarks from one of the latter class explaining "why and where he is at" ought to prove interesting, to say the least.

AN ADVOCATE OF UNITED ACTION.

S. M. EMERY, of Lake City, Minn., vice-president of the American Association of Nurserymen, has been requested to assume the directorship of an experiment station in Montana. A better selection would be difficult to find, says the *American Agriculturist*, for Mr. Emery has had large experience in experimental and educational work as an active regent of the Minnesota University in charge of its School of Agriculture and Experiment Station. He is also one of the most successful among the horticulturists, dairymen, breeders, and general farmers of the Northwest, and is familiar with Montana's interests.

COMMERCIAL FERTILIZERS.

RESULT OF FIFTEEN YEARS EXPERIENCE WITH VARIOUS KINDS APPLIED TO NURSERY-ROW—THE NEEDED ELEMENT OF PLANT LIFE FOUND AFTER REPEATED FAILURE WITH COMPLETE AND SPECIAL FERTILIZER—BEST MODE OF APPLICATION—PERCENTAGE OF AVAILABLE PLANT FOOD.

Mr. Terry's article in the February number of your valuable paper on this subject prompts me to give my experience. My opinion is that if Mr. Terry gets the right kind of material in that "bushel basket" he will have a pleasant experience to give, but if on the other hand he hopes to succeed by the use of the "special" fertilizer, manufactured and sold as the panacea for all the nurseryman's ills, he will have more experience in the way of a depleted pocket book than in an increased growth of his stock.

I am located in a purely agricultural district, where it is impossible to get barnyard manure at any price, except that which is made on my own place; this I use on my nursery ground, or in my farming operations as circumstances may require. Being thus located, it became necessary for me from the start to resort to the use of commercial fertilizers. In this my experience has been quite varied, and the lessons learned rather expensive; yet I believe I have succeeded in finding the one element of plant life which we all need.

The principle adopted by intelligent farmers in the rotation of crops, to use a complete fertilizer, is in the general way a good one. Another principle on which many successful farmers base their operations is to apply to the soil those elements of plant life in which experience has shown them their soils are deficient. While either, or both these rules may be good for the farmer, they will not bring satisfactory results to the nurseryman. What we want to do is to put into the ground that which our trees will assimilate and give back to us at once, with good interest, in the way of increased growth of clean, smooth, bright stock.

After a series of partial failures in using "complete fertilizer," I became convinced that I was acting on a wrong principle. I then began looking up some "special" grade of fertilizer. These too, gave only partial satisfaction, so that I was compelled to extend my experience. I next decided to give my trees just that element which I believed they needed to insure a satisfactory growth. I was, however, at a loss to know from what source I should obtain this one element, but after considerable inquiry and some correspondence, I began using kainit quite extensively. I soon learned though, that this was still not what I wanted, as it proved quite expensive and failed to push the stock to that degree of development which I desired it should reach. The following year I was persuaded by the advice of an old nurseryman, coupled with that of a friend who was manufacturing fertilizer, to use

nitrate of soda, but this too was a failure, and I almost despaired of success.

During the following winter it was my good fortune to attend a lecture delivered by Dr. Calder of Harrisburg, in the course of which he advised the use of muriate of potash on old orchards to ensure a good growth of wood; here I had just what I wanted; and just what I have used for five years, on apple peach, plum, apricot, cherry and quince, and which has never failed to produce the results desired. In using muriate of potash we get 82 per cent. of plant food which our trees take up at once, while we handle only a small portion of unavailable matter; while in the use of almost all other fertilizing material we are compelled to handle a very large per cent. of unprofitable material. For instance, in the use of kainit we get about 13 per cent. of potash and 87 per cent. of material having little or no value to the nurseryman; hence to get as much potash from kainit as we get from one ton of muriate, we must buy more than six tons of the former, which will cost about thirty dollars more than one ton of muriate, to say nothing of the difference in the cost of transportation and labor of applying six tons of kainit against the cost of transportation and labor of applying one ton of muriate.

My mode of applying fertilizer of any kind to trees growing in nursery-row is, first to cut the ground away from both sides of the row with an "Iron Age" cultivator, then knock the middle out with a heavy hoe, after which the fertilizer is distributed evenly along in the row, getting it as close to the roots of the trees as possible, or even on them, if we can. The ground is immediately turned back on the trees as soon as the fertilizer is applied. I prefer this plan to that of sowing the fertilizer broad-cast, especially when the trees have passed the second year. Care must be taken not to apply muriate of potash too late in the season, never after June 1st, or you stimulate a growth which will continue late in the fall, and not be able to withstand a severe winter. I use generally from 200 to 300 pounds per acre, and apply as early as possible, last of April or first of May.

I have found it a good plan to apply a mixture of dissolved bone and muriate of potash on my nursery ground before planting. I use from five to eight hundred pounds of bone and two hundred pounds of potash per acre, well mixed and drilled in quite deep, as soon as the ground has been ploughed. I have had poor success applying fertilizer a year or two in advance of the planting, as is sometimes advised.

My experience with manure for trees has been quite limited, but it seems to me the cost would over-run the profit, and I would value it more for its ability to put the ground in good mechanical condition and to keep it loose and pliable, than for its fertilizing qualities.

In support of my potash theory, I will add, in conclusion, that nearly all the prepared fertilizers show on analysis of from 15 to 22 per cent. of available plant food, the remaining 80 per cent. of what—on which we are asked to pay freight and cost of handling? Then remember, that of this possible 20 per cent. of plant food your trees will likely appropriate 10 per cent., the balance remaining in the ground to be used by succeeding crops of grain and grass.

Floradale, Pa. C. L. LONGSDORF.

Among Growers and Dealers.

Professor John H. Comstock, of Cornell and Leland Stanford Universities, the well-known entomologist, is busily engaged in the production of a text book at Palo Alto, California.

The Astoria Nurseries, at Long Island City, N. Y., lately operated by Mrs. Hewitt, *nee* Coffin, have been leased by a company, and will be conducted under the management of Thomas G. Williams.

The Salt Lake City Nursery Company has been incorporated with a capital stock of $25,000 in 25,000 shares. Martin Christopherson is president; Robert Wills, vice-president; and John Gabott, secretary.

C. F. McNair, of Dansville, has returned from an extended visit to Philadelphia, where he went for treatment for chronic illness. He has been sick during the last year. His cousin has had charge of the business during his absence.

Colonel U. B. Pearsall, secretary and treasurer of the Hart Pioneer Nurseries, of Fort Scott, Kansas, made a flying trip East on business last month. He will visit Rochester and other eastern points again next month. He reports business brisk in his section.

Lewis Chase, recently returned from a winter's sojourn in the South, says that the land in his nursery of 1,000 acres in Alabama is a clay loam with a mixture of iron and that it is especially adapted to the growing of cherries, American plums, Japanese plums, standard pears and all shrubs and roses.

J. H. Shepard, formerly superintendent of Oakland Cemetery, Chicago, has been engaged as superintendent of Riverside Cemetery, this city. He will superintend the planting of 3,000 trees and shrubs ordered from Ellwanger & Barry's nurseries, including nearly every variety used in landscape gardening.

The Smith Nursery Company, of Springfield, Ohio, has been incorporated with a capital stock of $180.000. The incorporators are W H. Smith, Frank Smith, Iowa Smith, George Smith, and D. P. Jeffries. The nursery firms of W. H. Smith & Son, Iowa Smith & Co., and Smith's Nursery Company, will be merged into one company and will move their office, stock, etc., to Springfield.

Among the Exchanges.

PRODUCTION OF CITRUS FRUITS.—That we are nearing the point of self-support in the production of oranges is evident from the declining imports of such fruit. It is not long since there were imported into the United States nearly two million boxes of oranges, mostly from Italy and Spain. Each year, however, has noticed a general increase of the American crop with the result that we have had to purchase smaller amounts of the foreign product. At present rates of increase in production, it will be but a short time until we shall grow more fruit than can probably be sold, especially at high prices in this country, and must ourselves seek foreign market for oranges. Of lemons we still lack a great amount of enough to supply the home demand.—*California Fruit Grower.*

FROZEN PLANTS.—The exact manner to which frost acts to the injury of vegetation is not yet well understood. It is known that injury is always more pronounced in light than in darkness. Roots of trees exposed to frost in the day time usually rot, while if they are frozen and thawed in the darkness they seldom suffer. Nurserymen understand this better than the amateur. Boxed plants, usually hardy, may have their roots frozen, and yet, if thawed in a dark celler, or suffered to remain in cases until thawed, are seldom injured. Small conservatories or frames, when by accident the plants in them get frozen, should be darkened and frozen plants allowed to thaw in that way, and the injury is much less, if any at all, than when thawed by the sunlight.—*Meehan's Monthly.*

DESTROYING NURSERY STOCK IN CALIFORNIA.—The root knot, or root galls, at present so conspicuous on much of the nursery stock being shipped into the country and from one local point to another, is assuming alarming proportions. The singular thing about it is that as yet no remedy has been found and the cause of the malady is still a mystery. Its presence is not confined to any one kind of deciduous fruit trees, but covers quite a wide range. However, it is principally found on peach, almond and plum roots, and seems to be contagious in its character. We know of one case in the San Gabriel valley where its presence has become manifest on every single tree in a prune orchard. These trees were very carefully examined before planting, and the trees were supposed to be absolutely free from disease and insect pests. Yet after two years in orchard form every tree has been found subject to the root knot or gall and the owner has concluded to dig them all out and substitute in their place lemon trees. The horticultural commissioners are endeavoring to eradicate the disease by destroying all infected trees. Touching their powers in the premises to employ destructive measures, District Attorney H. C. Dillon of Los Angeles county has submitted the following opinion based upon the statute in force touching the regulation of pests and disease now affecting the industry of horticulture generally in this state. The opinion given is in reply to a request of the Los Angeles County Board of Supervisors, and is as follows:

Reports have been submitted to me showing that root knot is a contagious disease; that new trees planted in the same soil from which a tree afflicted with this disease has been taken, contracts the same disease. All soils in which trees afflicted with root knot have been taken are recommended by competent authority to be planted for several years to vegetables or cereals before again planting to trees. My opinion, therefore, is that the disease called root knot is a contagious disease; that it is within the meaning of the acts above quoted, and the proper officer named in said acts is clothed with full power to destroy all such trees, if incurable, and I am advised that they are.—*Rural Californian.*

THE ORANGE TRADE OF CALIFORNIA.—The great and rapid growth of the nursery business in California is largely due to the fact that the hurried development of horticulture there has for years kept the demand for nursery stock ahead of the supply, and many would-be orchardists have been obliged to propagate their own trees or go without them. Once started in a small way a local demand has come for trees that has stimulated further propagation and many have drifted into the nursery business who never intended to. The "orange fever," both in the upper Sacramento Valley and in Southern California, having made orange trees very high in price, hundreds of people began a few years ago to propagate their own trees, and now in the state of California alone there are over 100 orange tree nurseries, with over 400 acres devoted to the business, having in all about 3,375,000 young trees, or sufficient to plant over 40,000 acres of orange groves. And as all this vast number of trees must find sale in California and Arizona only, it would appear that the orange business is likely to "slop over," on the Pacific Coast just as it did in Florida a few years ago.—*Florist's Exchange.*

AMERICAN ASSOCIATION MEETING.

The following list of addresses has been prepared by Secretary Charles A. Green, for the eighteenth annual meeting of the American Association of Nurserymen at Chicago, on June 7th:

Hon. N. H. Albaugh, Tadmor, Ohio, "Effect of Frosts on Stocks and Trees in Transit, How to Treat Them, and How to Prevent Freezing."

William Pitkin, Rochester, N. Y., "Cause of Recent Low Prices for Trees, etc."

C. L. Watrous, Des Moines, Iowa, "Does it Pay the Nurseryman to Make Exhibits of Fruits at State and Local Fairs?"

T. V. Munson, Dennison, Texas, "The Nurseryman's Position Towards National, State and Local Horticultural Associations."

Geo. W. Campbell, Delaware, Ohio, "What is the Cost of Boxing, and Should we Make a Charge for such Service."

Prof. L. H. Bailey, Ithaca, N. Y., "Ultimate Results of the World's Fair Exhibits of Fruits and Flowers."

J. H. Hale, So. Glastonbury, Conn., "Humbugs in Horticulture."

Hon. S. M. Emery, Lake City, Minn., "How to Reform the Tree-peddler."
Thomas Meehan, Germantown, Pa., "Hints on Propagation."
W. C. Barry, Rochester, N. Y., "Nursery Experiment Plantations."
J. Jenkins, Winona, Ohio, "Managing Nursery Employees."
Prof. B. E. Furnow, Washington, D. C., "Nurserymen and Forestry."
Robt. Douglass, Waukegan, Ill., "Thoughts on Evergreens."
Geo. E. Meissner, Bushberg, Missouri, "Duties of Nurserymen to the Public."
G. J. Carpenter, Fairbury, Neb., "Outlook for Western Nurseries."
H. E. VanDeman, Washington, D. C., "Reform in Nurserymen's Catalogues."
E. W. Reid, Bridgeport, Ohio, "Handling Strawberry Plants."
W. F. Heikes, Huntsville, Alabama, "Some Paragraphs."
Geo. S. Josselyn, Fredonia, N. Y., "Can any Fun be Gotten out of the Nursery Business?"
Irving Rouse, Rochester, N. Y., "What are the Benefits of Duties on Nursery Stock?"
P. J. Berckmans, Augusta, Ga., "Work of the American Pomological Society."
Parker Earle, Cobden, Ills., "Work of the American Horticultural Society."
M. A. Thayer, Sparta, Wis., "Small Fruits in Wisconsin, Illustrated."
W. B. K. Johnson, Allentown, Pa., "Spraying for Profit."
D. A. Porterfield, Traer, Iowa, "Should Wholesale Nurserymen Send Wholesale Price Lists to Planters?"
Chas. Wright, Chicago, Ills., "The World's Fair as an Educator."
C. S. Harrison, Franklin, Nebraska, "The Future of the Western Plains."
T. J. Lacy, Washington, La., "Improvement in Nursery Stock."
Harlan P. Kelsey, Linville, N. C., "Hardy Native American Plants for Americans."
Ralph T. Olcott, Rochester, N. Y., Editor of NATIONAL NURSERYMAN. "Relation of the Nurseryman to Trade Literature."



THE CHAMPION PEACH.

IN OUR OWN BEHALF.

The publishers of this journal have noted with much satisfaction the hearty commendations of their enterprise received by every mail from all sections of the country. Particularly gratifying are the expressions of appreciation of its value as an advertising medium. In these days of busy competition the successful business man has learned that he cannot afford to depend upon old methods. He must have a direct and certain means of reaching those whom he seeks. Every enterprising advertiser knows from experience in his own case that the average advertising circular sent through the mail is consigned almost immediately to the waste basket by the recipient.

The advantages of such a journal as THE NATIONAL NURSERYMAN in this connection are apparent. Here is a publication that represents the trade. It circulates throughout the country, and is found upon the desk of every grower and dealer, who is impelled to read it by reason of the views of leading men there represented; and the journal is preserved on file for future reference. Nurserymen themselves say it is a credit to the trade. When, therefore, the advertisement of a firm appears regularly in its columns, in company with those of the leading nurserymen of the country, it is a perpetual reminder of a source of supply for the wants of all.

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NOTHING BUT FAVORABLE COMMENTS.

IRVING ROUSE, LAKEVIEW NURSERIES, ROCHESTER, N. Y. "I trust you will be able to make the succeeding numbers of the paper as attractive as the initial issue. I have heard nothing but favorable comments on it."

H. E. VAN DEMAN, POMOLOGIST, U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C. "I think it will prove an excellent publication for nurserymen, and we desire to have it on file in this office.

SHOULD HAVE THE SUPPORT OF ALL.

SILAS WILSON, ATLANTIC, IA. "I am convinced that it is a publication that should receive the hearty support of all active nurserymen. It is a medium of high standard for the exchange of practical thoughts. Success to the enterprise."

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WILLIAM WATSON, ROSEDALE NURSERIES, BRENHAM, TEXAS. "I have just received number two of your new paper. I like it, and wish you God speed. I send you my dollar. I see the face of Mr. Smith, of Geneva. That alone is worth the dollar."

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PACKING GROUNDS OF CHASE BROTHERS COMPANY, ROCHESTER. N. Y.

The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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U.S. DEPARTMENT OF AGRICULTURE RECEIVED DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., MAY, 1893. NO. 4.

SPRING SALES.

Reports from Various Points Regarding the Season's Trade.

AN INCREASE OF BUSINESS IN ALL SECTIONS, WITH NOTABLE ADVANCES IN SEVERAL CASES, NOTWITHSTANDING LOW PRICES—STOCK IN GOOD CONDITION—THE WEATHER GENERALLY FAVORABLE—PROSPECT OF A VIGOROUS SUMMER CANVASS—SPRING PLANTING PROGRESSING—DETAILS FROM THE PACKING GROUNDS OF HEAVY RETAILERS.

Reports from the packing grounds all over the country indicate that, notwithstanding the low prices prevailing, there has been a large increase in many cases in the amount of stock handled in the retail trade. The busy season has been characterized by the usual weather, which in most sections has been very favorable. On all the large packing grounds in this vicinity there have been the usual busy scenes. The largest grounds are centered at East Rochester.

CHASE BROTHERS COMPANY.

The largest of the retail shippers at that point is the Chase Brothers Company, whose retail output this spring aggregated $300,000. This company, conducting the New England Nurseries, was the first to develop the canvassing system in the sale of nursery stock. It employs nearly 1,000 salesmen through whom it covers every portion of the country. The firm of Chase Brothers commenced the business of retailing nursery stock thirty-five years ago. It was the pioneer in its line, and as its business has increased, it has succeeded in keeping in the front rank with improved methods and facilities. At first it made its headquarters in Maine, buying stock from Western New York growers; but as sales increased it was found expedient to move the headquarters to Rochester, and now the firm is one of the largest growers of nursery stock in Western New York. Its plan is to lease pieces of land, instead of purchasing them, thus securing strong, fresh soil, and a superior grade of stock. Its planting for the Spring of 1890 was 3,189,000 trees and plants; for the Spring of 1891, 1,897,000; for the Spring of 1892, 3,080,000. It now has 750 acres under cultivation. This Spring the planting was increased. On July 1, 1887, the firm of Chase Brothers was reorganized under the corporate name of Chase Brothers Company. The officers are: President, Lewis Chase; treasurer, Ethan A. Chase; secretary, William Pitkin. Mr. Pitkin entered the business thirteen years ago. He has had general charge much of the time.

Several years ago Chase Brothers Company purchased for its packing and shipping grounds a tract of land at East Rochester, comprising six acres, adjacent to the New York Central & Hudson River Railroad, and established there one of the most complete shipping grounds in existence. The stock received from the nurseries is trenched in at the south side of the grounds upon either side of a wide run-way. The long trenches are labeled by means of large sign boards upon tall posts. A force of 350 men is employed, and the handling of stock is in accordance with a system which reduces liability to error to a minimum. Experienced foremen direct the workmen in each department. The stock for each customer's order is selected, and placed between stakes, where it is checked and tagged and removed to the binding ground, where it is again compared with the order list. It is then placed in a bin, one of a long series, each bin representing the orders that go to one city or town. These orders are again checked from the list for that town and when correct the bin is closed upon the inside and opened upon the outside where workmen are packing the boxes from the bins preparatory to weighing them on platform scales near by, and then removing them a short distance further to the large platform at the special switch which runs from the railroad into the grounds.

There are six cellars, comprising 15,000 square feet, on the grounds. These are provided with large and small bins for the accommodation of tender stock of all kinds. In these cellars the handling of stock of this kind may begin and continue during all kinds of weather without danger of freezing. Other buildings on the grounds are a label house, a large barn, a box factory, two dwelling houses and two offices. In the box factory 300,000 feet of lumber, 3,500 pounds of scrap iron, and 75 kegs of nails are used each year. Three thousand boxes were made up this Spring, and between 600,000 and 700,000 labels were ordered to be used in addition to a considerable supply on hand. The company packs daily during the season retail orders valued at from $25,000 to $30,000. It sends out 750,000 trees and shrubs in the Spring, and 250,000 in the Fall. Chase Brothers Company does a general nursery business throughout the United States and Canada, and has an

office at Colborne, Ont. under the management of James McGlennon & Son.

When the firm of Chase Brothers first started in this city, one clerk, James M. Edwards, was employed. Now there are fifty. Handsome offices are provided for the firm and its twelve connections, in the Nursery Exchange on East Park, this city.

The members of Chase Brothers Company are directors in the Alabama Nursery Company, at Huntsville, Ala.

BROWN BROTHERS COMPANY.

One of the largest nursery firms in the United States is Brown Brothers Company, proprietor of the Continental Nurseries. The name of the nurseries is significant, for it is the only company growing stock both in Canada and the United States. It has large offices in Rochester, Chicago, Toronto and Portland, Ore. Charles J. Brown and Robert C. Brown have been in the nursery business since boyhood. The company originally did business under the name of Brown Brothers, but was some time since incorporated under the laws of New York as the "Brown Brothers Company," with a paid up capital of $100,000.00. Charles J. Brown, Rochester, N. Y., is president; Robert C. Brown, Toronto, Ont., treasurer; and E. C. Morris, Chicago, Ill., secretary. Charles J. Brown has always attended to the home offices and nurseries, while Robert C. Brown has opened and managed the branch offices until firmly established. Mr. Morris was an employee of the firm, and his aptitude and faithfulness to business won him an interest in it. The nurseries are located at Irondequoit, N. Y., within a few miles of Rochester, in the beautiful Genesee Valley, and at Ridgeville, Ont., in the noted Niagara district. There are no places in the world so well adapted to the raising of nursery stock. The soil is of strong, gravely loam, with a heavy clay sub-soil, on elevated surface land and thoroughly well drained, producing vigorous and hardy trees and plants. The close proximity of the lakes causes a slow and careful growth of the tree in the nursery, thus ensuring a tree that will be able to stand the shock of transplanting. The assortment of fruits, ornamentals, shrubs and flowers raised by the company includes everything of recognized value, and embraces over 800 district varieties. New varieties are propagated annually, but before offered to the public are thoroughly tested on the experimental grounds in Ridgeville and Irondequoit, and their good qualities positively determined. For the season of 1891 this company propagated in its nurseries over a million trees, and for the season of 1892 one and a half million, besides fifty thousand roses and an immense amount of ornamental shrubbery and trees, grapes, small fruits, etc. It requires a force of from one hundred and twenty-five to one hundred and fifty skilled hands to grow this stock. Twenty-five to fifty teams of horses are used constantly, and each nursery is well stocked with cattle to furnish manure. The Rochester nurseries have hundreds of acres under nursery cultivation. These nurseries are supplied with greenhouses, cellars for storing trees, residences for employees, and barns for cattle. No expense has been too heavy where it tended to an improvement.

The Canadian nurseries of Brown Brothers Company, also comprising hundreds of acres of land under actual nursery cultivation, are as stated, located at Ridgeville, Ontario, about half a mile out of the town, and twelve miles from St. Catherines. The property comprises three greenhouses, two of which will hold 30,000 plants each and the third 15,000. There are also shops and a root cellar one hundred and twenty feet long. In these nurseries only the hardiest varieties are propagated. These nurseries are under the control of Charles Fisher, who comes of a family of nurserymen, and who is a recognized authority on all matters pertaining to fruit growing, and especially in the production of clematis, roses and ornamental trees and shrubs. Mr. Fisher is a stock holder in the company. During the packing season this company employs in its packing yards from four hundred to eight hundred men and boys, and the shipments daily aggregate over $40,000 in value. The company makes all its own boxes, having shops where men are employed at this work in the winter. The Rochester packing yard is located in the eastern part of the city, adjoining the tracks of the New York Central Railroad, from which the company has its own side track and platform, enabling it to load and ship stock with more despatch than if compelled to send it through the regular freight houses. The Ridgeville packing yard is located at the nurseries.

The home office of the company is in Rochester, where handsome and commodious offices are located in the new stone building of the Trust and Safe Deposit Company, on Exchange street. President Charles J. Brown is located here. The Chicago offices, in charge of Edward C. Morris, are located in the New Unity Building on Dearborn street, in that city, and are elegantly fitted up for the nursery business. The Toronto offices are in the Canada Life Building on King street west. A great corps of correspondents, stenographers, bookkeepers, copyists etc., is employed by this company, and fifteen Remington typewriters and several phonographs are in constant use in its various offices. It was the first nursery firm to use the phonograph in a business way. Robert C. Brown opened the Portland office last year and is located there.

President Charles J. Brown and a full corps of assistants have been overwhelmed with work throughout the season, disposing of the Rochester business. Mr. Brown estimates that the business at the Rochester



PACKING GROUNDS OF BROWN BROTHERS COMPANY, ROCHESTER, N. Y.

grounds alone aggregates $165,000 this spring. He has had a force of 300 men on the packing grounds and in the nurseries at this point.

OTHER LOCAL FIRMS.

Nearly all the local firms report an increase over the business of last Spring. Several of the largest as noted, have made large advances in their business. Many report an increase of 20 per cent. over last Spring's trade. It is estimated that the retail business of Rochester this Spring, distributed among 28 or 30 leading firms amounted to more than $1,000,000. A carefully prepared estimate, based upon the statements of dealers to which due allowance was given, aggregates $1,003,000.

The immense business of Ellwanger & Barry progressed throughout the season at the usual steady rate. They commenced filling orders on March 22d, and will continue as long as the weather is favorable. Most of their retail business is the result of mail orders, and, as is well known, it comprises one of the largest enterprises in which the choicest of stock only is concerned. The firm does a large wholesale business with dealers and furnishes in great quantities ornamental stock for parks and cemeteries and large private grounds. The season has been very favorable for them and they report a most satisfactory trade. They have no packing grounds as they fill orders directly from their extensive nurseries.

George Moulson & Son, of the Union Nurseries, did a heavy retail business, increasing their sales 20 per cent. Their wholesale trade was about the same as last Spring. Their salable stock is all disposed of. They report a large sale of Carolina Poplars, one salesman disposing of over 300 to one customer. They report an increasing demand for Norway maples. Miller & Patterson, large dealers of East Springfield, Pa., packed with this firm.

J. F. Norris, of Brighton, N. Y., is doing a large business in a quiet way His packing grounds are not large, but he has large shipments of stock coming on almost daily during the season, and these are disposed of in remarkably short time to the 35 dealers whom he packs. These dealers represents districts in all directions from Nova Scotia to the state of Washington.

E. Richmond, of Newark, N. Y., did a small packing with the H. E. Hooker Company. He says he is tired of the nursery business and intends to try something else. He has been making sales in Massachusetts. M. J. Doyle, of Northumberland, Ont., and W. E. Hyde, of Afton, N. Y., also packed with the Hooker Company.

L. L. May & Co., A. D. Pratt, J. F. LeClare, Thos. Bowman, H. P. Freeman & Co., Glen Brothers, Green's Nursery Co., C. W. Hawks & Co., Hooker, Grover & Co., and the W. & T. Smith Co. did a large retail business.

R. D. Luetchford makes a specialty of small ornamental stock. He disposed this Spring of as many tree roses as all other firms together and sent ont 400 rhododendrons. He imports directly from Europe.

Thomas C. Wilson, of Brighton, N.Y., has been sick much of the Winter and Spring. He packed J. L. Merrick & Co., of Waterville, Me., and McKay Brothers, of Bangor, Me., both of whom report increase in trade.

W. S. Little & Co. packed E. C. Brown & Co. and George K. Higbee & Co., of this city.

AT GENEVA.

GENEVA, April 29.—Growers and dealers report a lively trade this season, the large firms running far ahead of previous records. The largest wholesaler here, The W. & T. Smith Company, reports a large increase over last Spring's business, and the cleaning up of all its salable stock. R. G. Chase & Company, the largest retailers, report the heaviest business they have ever done. It is estimated that the retail business at this point this year exceeded $500,000, and that the wholesale business was not far from $150,000. Geneva has had a heavy trade with Rochester, several large dealers in that city buying almost their entire stock of firms here.

Not as many dealers packed here this season as formerly. Among those doing the largest business were O. K. Gerrish, Portland, Me.; W. H. Essig, Detroit, Mich.; A. S. Chadbourne, Worcester, Mass.; A. H. Chadbourne, Gardiner, Me.; Small Brothers, Stockton, Me.; W. H. Day, Turner, Me.

The Messrs. Chadbourne packed with W. & T. Smith and W. H. Essig with Bronson & Hopkins. The following packed with Hammond & Willard: J E. Hamilton, North Orwell, Pa.; W. H. Jones, Brighton, N. Y ; E. Gregg, Harrison, Ont.; E. J. Brastell, Smethport, Pa ; Chester Holt, Coxsackie, N. Y. Probably 25 dealers packed here this season. Mr. Gerrish said he had doubled last Spring's business.

AT DANSVILLE.

DANSVILLE, N. Y., May 1.—The weather has been somewhat unfavorable for digging, rain and snow storms having occurred frequently, causing vexatious delays. The shipping here is nearly over and about $50,000 worth of nursery stock has been sold this Spring. Of this amount, perhaps 25 per cent. has been retail. The bulk of the sales here is made in the Fall. So far as can be reasonably judged at this time, last year's budding promises to be unusually good, and no injury by the Winter to older stock coming on has been reported. Many nurserymen are now planting, some having already finished. The amount of stock planted here this Spring will be from 30 to 40 per cent. less than last year. Several of our nurserymen are not planting any stock this Spring owing to the extremely low prices that prevail.

DANSVILLE, May 2—A leading firm here estimates that the amount of stock sent from Dansville this season at retail was from 12 to 15 carloads and the amount sent out at wholesale from 75 to 80 carloads.

C. F. McNair & Co. shipped about 9 car loads this season, a third increase over other seasons, with fair demand, prices however, ruling low. Surplus stock is about all taken up.

IN KANSAS.

Fort Scott, Kan., April 20.—Over 100 men have been employed during the last few weeks in packing the stock handled by the Hart Pioneer Nurseries here, under the personal supervision of the proprietors, Messrs. Combs & Pearsall.

Aside from the large force employed at the packing grounds in the city, this firm has had upwards of seventy-five men employed in planting and pruning their stock at their nurseries for the past three weeks. They now have two hundred and forty acres in nursery stock about three miles north of the city, and have also secured 560 acres one mile south of the fair grounds, known as the Judge Miller property. Upon the latter tract they have made their entire new plant this Spring, consisting of over one million grafts of various kinds, with peach seedlings sufficient to bud one half million more trees, together with cherry, plum, apricot and quince, in corresponding quantities, also one million grape cuttings, and large numbers of ornamental shrubs and roses. With a view of handling their business at this last named point, the Missouri Pacific railway company has already put in a switch, and the K. C., F. S. & M. R. R. company will doubtless provide the same facilities, and the junction depot of the latter road will probably be made a station for billing out freight.

It is the intention of the firm to concentrate their plant upon this tract, as the stock can be grown and handled to much better advantage than on the tracts north of the city. The firm has a large market in Colorado, and many car loads of trees and small fruits are shipped East to such nursery points as Bloomington, Dayton, Geneva and Rochester.

Colonel Pearsall, in reply to an inquiry, said: "The season here has been unusually favorable for packing and shipping, as we have had a much dryer Spring than usual. The planting of nursery stock of all kinds is nearly completed, except the grape cuttings, which we usually defer planting until about the last week in April. Our business this year has been of greater volume than any previous season, and we have the same report from our brother nurserymen in this section. We think the prospects for a good trade the coming year are exceedingly bright. From what we can learn, the plant West of the Mississippi River is about the same as last year. Some have planted more, others less, but we think it will average about the same. The crop prospects, with the single exception of wheat in Northwestern Kansas, are good. Stock of all kinds came through the winter in good condition, and in our case, we have the best stand of buds we have had in many years. We are still very busy shipping orders for the Northern trade."

IN MISSOURI.

ST. LOUIS, MO., April 22.—The spring packing season for nursery stock is now about over in St. Louis, all undug stock being in full leaf. The season began much later than usual, and closed at about the same time, as the result of the weather turning warm quickly. Sales have been excellent in this vicinity, but prices on most staples are too low for profit. S. M. Bayles said to-day: "Our individual sales 'in dollars and cents' last Fall were about 20 per cent., and this Spring about 30 per cent. greater than in any previous year in the history of our business, notwithstanding the prices were decidedly lower. There was a good demand for all staples, and an extra heavy demand for standard pear, cherry and peach. We clear all our fruit trees when two years old from bud, with the exception of apple, which we grow to three years, and peach to one year, and have nothing of salable size left on our packing grounds or in nursery rows except a few dwarf pear. The prospect is bright for a good fruit crop, in this locality, with exception of berries which have been hurt somewhat by late frosts."

Up at Louisiana, this state, 'Stark Brothers have been doing an immense business. They have recently added to their facilities for handling and shipping stock. By means of thirteen large packing houses and cellars they are enabled to prolong the shipping season and thus dispose of more stock than even their large force of employees could handle to advantage otherwise. They have large branches at Chicago, St. Louis and Kansas City, and have built up an enormous trade as the result of unlimited push and enterprise. It is difficult to estimate the amount of their business this season, but it is safe to say that it will exceed that of any firm in the West and will doubtless equal or exceed that of any in the East.

IN MICHIGAN.

Monroe, Mich., May 2.—The characterizing feature of the trade in this field was the increased demand for peaches. The people clamored for peaches and the agents echoed the cry. Nearly every planter had his mind set on this fruit and it is safe to estimate that the four nurseries located here disposed of at least 400,000 trees. The demand was felt with great force from the Lake region where many planters set out from 1000 to 2000 trees each.

The demand for Crawfords was not so large as usual while that for the Elberta, Hill's Chili and New Prolific

was constant and strong. This latter sort has won popular favor and though it is comparatively new and at first depended only on great efforts for recognition, it has become widely known as the best peach to plant for profit. The tree is thrifty, hardy and very prolific, while the fruit is perfect. Greening Brothers are the introducers of this variety and they hope soon to have enough trees to supply the demand. The call for apples, pears and plums did not diminish nor increase. Nothing peculiar either in the varieties or the quantities sold was noticed.

Owing to an increase of traffic on account of the World's Fair, shippers here did not get as good accommodation on the trunk lines as they have been accustomed to have. Freight was delayed and many delivery appointments missed in consequence. Added to this were the difficulties on the T. & A. A. R. R., where the strikers have so crippled the company that it has almost suspended business.

IN THE MIAMI VALLEY.

DAYTON, O., April 20.—The trade in the Miami Valley has been unusually active this Spring, quite beyond expectation. The tone of the trade was vigorous and healthy, well calculated to inspire the disheartened nurseryman with new hope for the future. Most growers and dealers report sales at least 20 per cent. in excess of the Spring of 1892. Dealers generally report good collections. Fruit prospects are good. The summer canvass promises to be a vigorous one, and with continued favorable conditions, the trade next fall will be heavy.

ACROSS THE BORDER.

TORONTO, April 17.—Stone & Wellington report that they packed for their retail orders this Spring as follows: Standard apples, 100,000; crabs, 5,000; dwarf pears, 5,000; plums, 25,000; apricots, 2,000; ornamental trees, 6,000; hedge plants, 25,000; bulbs and indoor plants such as carnations, chrysanthemums, etc., about 1,000; grapes, 30,000; currants, 75,000; blackberries, 20,000; shrubs, 8,000; dwarf apples, 1,000; standard pears, 15,000; cherries, 7,000; peaches, 30,000; quinces, 1,000.; strawberry plants, 50,000; evergreens, 20,000; roses, 6,000; raspberries, 70,000; gooseberries, 30,000; asparagus, 6,000. They state that their sales show an increase over last year of about $25,000 retail, and that their wholesale business has been the largest on record. They have sold closely on all lines of stock.

JUST WHAT IS REQUIRED.

JOHN PALMER & SON, LIMITED, ANAN, DUMFRIESSHIRE, SCOTLAND.—"The third issue of your new publication came duly to hand. We think it is just what is required, and the handsome manner in which it is gotten up, and the highly interesting articles it contains, must make it welcome in every practical nurseryman's office. We wish you success and herewith enclose $1.25 for one year's subscription."

ADDED INCENTIVE TO FRUIT RAISING.

A new refrigerator car for the transportation of fruits and vegetables promises to revolutionize this important feature of the fruit business. The first car of the new pattern has a freight capacity of thirty tons. In each end is a galvanized iron tank extending from bottom to top of car, and occupying but two feet of space in width. These tanks, designed to contain the patented refrigerific compound in connection with the ice, are connected by means of a channel way or pipe flat through the middle of the car under the floor, through which the cold radiates from the solution evenly and with any desired degree of intensity. This car will maintain a low temperature beyond thirty days at a lower rate than has hitherto been attained by the use of enormous quantities of ice and salt almost daily replenished. It is claimed that this car will transport perfectly ripe fruit from the Pacific Coast to Chicago in good condition. At present all fruit for transportation for so long a distance has to be packed before it is at all ripe. It will also greatly reduce the cost for ice, and so lesson the cost for transportation.

The inventor of this new process proposes to carry eighteen tons of fruit, which will require but three tons of ice during the entire trip, and with an unvarying temperature, for any length of time under twenty days. If this new process and the new car can make this great saving in cost, and at the same time take well ripened fruit and deliver it in good condition, it will be difficult to estimate its benefit. It will mean that an immediate market for all the fruit that can be raised in favorable sections, which are at great distances from the most desirable markets, can be found at greatly increased prices.

SYSTEM OF SCORING FOR NEW VARIETIES.

To the Editor of THE NATIONAL NURSERYMAN:

In this age of progress in the nursery business, and amidst the introduction of new varieties, some plan should be brought forward by which a comparison can be made with acknowledged standard sorts, so that varieties of sterling merit to the public may be preserved and others discarded. A mere written or printed recommendation is no comparison, neither is it a safe rule to go by, as many an experienced fruit grower has found to his sorrow. A plan alone is hardly sufficient to accomplish the purpose, but a system of scoring to be adopted by our experiment stations and the Department of Agriculture would accomplish the end desired.

The originator of any new fruit who has it first tested, in different localities and states, by our experiment stations and leading fruit growers, and abides by their decision will, when introducing it, see the benefits of his waiting, if the same system of grading has been followed by all. All that he need do after this much is

accomplished will be to push its sale vigorously in one or more good advertising mediums like THE NATIONAL NURSERYMAN, bearing in mind, that the *fewer words* it requires to properly show the merits of his fruit, the better, as busy people appreciate briefness, and patronize the man who advertises by such a system as shows at a glance that he has the article needed.

OHIOAN.

MARIANNA PLUM.

To the Editor of THE NATIONAL NURSERYMAN :

The note of our friend, W. K. Heikes, of Huntsville, Ala., I think, misjudges the purport of my remarks. The object was simply to show that, as a general rule, wherever it was possible, plants from seeds were more likely to be healthy than plants from cuttings, because, whatever special peculiarity a plant raised from a cutting might have, whether the roots were diseased by insects or through the work of fungi, is carried with the plant and spread to a degree that plants from seeds were not likely to. Certainly I had no idea of protesting against Marianna stocks from cuttings any more than any other nursery product raised in the same way. As a matter of fact, the knots on the roots were not the work of insects. The small pea-shaped galls, to which Mr. Heikes refers, I am familiar with, as certainly I am familiar also with the black knot on the plum, and I called attention to the fact of these knots existing on cherry roots as something novel and not within the knowledge of most nurserymen ; a fact I thought so new and interesting as to be worth placing on record.

THOMAS MEEHAN.

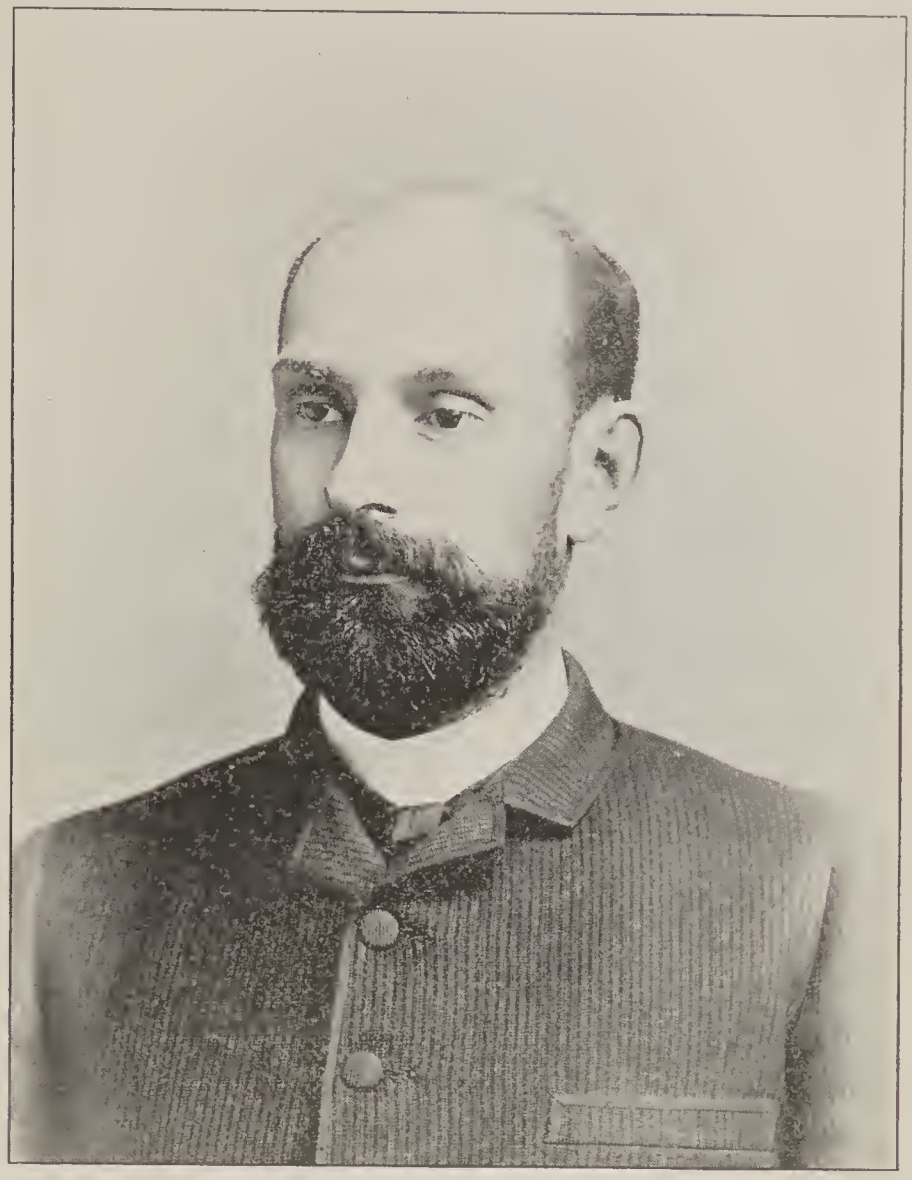
Germantown, Phila.

STECHER COMPANY'S EXHIBIT.

The Stecher Lithographic Company will exhibit samples of its work in the line of nurserymen's plates at the World's Columbian Exposition in a handsome oak case 12 x 4 feet and 8½ feet in height, made by the Vetter Desk Company of this city. The case has four large panels in the back covered with glass for the plates. At one end of the case is a desk and at the other is a set of capacious drawers, the whole forming a complete and convenient exhibit. The Stecher Company make a specialty of nurserymen's plates, and it probably is the largest producer of this class of goods in this country. The Vetter Desk Company has a national reputation for the highest class of work.

A WORK OF ART.

Number two of that elegant new journal, THE NATIONAL NURSERYMAN, published at Rochester, N. Y., has reached us. Its typography and make-up constitute a work of art, and the matter is first-class. We do not often meet a new publication of any kind that strikes us so favorably as THE NATIONAL NURSERYMAN.—*California Fruit Grower.*



IRVING ROUSE.

The largest importer of foreign stocks in this country undoubtedly is Irving Rouse of this city. His importations for a single year have exceeded eight million trees and plants Mr. Rouse came from Catskill, Green County, to Geneva, in 1871, and soon afterward became an agent for the nursery firm of Herendeen & Jones. He moved to Rochester in 1873, continuing in the nursery business, and in 1879, with H. T. Jones, he purchased the Lake View nurseries, at that time comprising 75 acres. Additions to the land have been made until the nursery now comprises 350 acres in a solid block. It is a clay loam, on a gentle slope, two miles from the city limits, in the town of Greece.

Mr. Rouse began the importing of stock because of failure to secure what he had ordered of European nurserymen, getting number one and number two stock, when extra stock was ordered. He decided to go to France and make his own selections. He succeeded so well that he rapidly enlarged this feature of the business. He has made eleven annual trips to France. His own stock is grown there especially for him, and he is therefore independent of the market. His importations comprise mainly pear, quince, plum and cherry stocks, with comparatively few apples ; also ornamentals. He imported this year 750 cases of stocks. He has excellent facilities for storing stock. One of his cellars will accommodate 1,000,000 seedlings, and another is still larger. Mr. Rouse grows very heavily the leading varieties of standard and dwarf pears.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance..... $1.00
Six Months ..... .50
Foreign Subscriptions 1.25
Six Months ..... .75

Advertising rates will be sent upon application.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., MAY, 1893.

THE SEASON'S TRADE.

Reports from the packing grounds at various points indicate a lively trade this season. Large dealers throughout the country report heavy increase in the retail trade. It is believed that all have held their own, that many have filled increased orders from old customers and added new names to their lists, and that in several notable instances, large businesses have been doubled. The weather has varied greatly in different sections. In the West it was reported particularly favorable at certain points, while at others the season was backward. In Western New York work on the packing grounds was delayed a week at the start and snow and rain interfered considerably with the work throughout April.

Little change is noted in the market. There has been a plentiful supply of standard pears; plums have been pretty well sold out; cherries are still high, and apples remain the same.

DUTY ON NURSERY STOCK.

The question of altering or removing the duty on imported nursery stock has received considerable attention of late. The placing of that duty involves a matter of interest not generally known. Three years ago it was found that so large a quantity of inferior stock was coming into the country that the value of good stock was not appreciated and the tendency was toward a depreciation in the value of trees propagated. A leading importer of this state headed a movement to secure the placing of a duty upon all nursery stock imported. He visited Washington, with others who were interested, and explained to the framers of the tariff the necessity for such action. Senator Hiscock promised to see that the matter was properly attended to. It was asked that a specific duty of $2 per 1,000 be fixed. There was delay and another hearing and finally Senator Hiscock said that as he understood thoroughly what was wanted there be no need of another visit to Washington upon the part of the nurserymen. When the matter came up for final settlement, a number of New York florists were on hand and they succeeded, partly through a misunderstanding of the congressmen as to what the nurserymen wished, in securing the duty of 20 per cent. ad valorem which has since existed.

Now, this duty does not protect the interests of those who are endeavoring to keep the market for first-class stock up to a high standard; inferior stock may be imported for a duty cost that is but a fraction of what it costs to import the same amount of first-class stock.

It is probable that action looking toward a remedy will be taken this year. President Cleveland contemplates the calling of an extra session of Congress, which may be held in September. As that session will be devoted to a consideration of tariff revision, it is obviously the very opportunity that is wanted.

Now is the time to decide upon what is wanted and prepare to take concerted action. The present duty is worse than none. Large importers argue that a specific duty sufficient to protect those who desire to import really good stock, would tend to shut out a great amount of second and third rate stock which is being brought in under the present system. Many growers, however, are in favor of free importation of stock, believing that any duty would be too high, and declaring that while it was thought, when the duty was placed three years ago, that thereafter more stock would be grown here, the fact was that not as much was grown.

Individuals who are most directly interested in the question might make personal application through their representatives in Congress; associations might take up the subject, and by resolution request action, or a petition signed by a large number of nurserymen might be presented to Congress.

NURSERYMEN AT THE WORLD'S FAIR.

J. M. Samuels, chief of the department of horticulture at the World's Columbian Exposition, in reply to an inquiry writes: "The domestic nurserymen fail to take the interest in the exhibit that foreigners have, although numerous circulars were sent to all the leading firms of the United States. The French exhibit, showing trees trained and grafted in different ways will no doubt be interesting to those who will attend the meeting of the Nurserymen's Association in June. I believe that not a single member of the American Association of Nurserymen has made application for space."

There is a tone of disappointment in Chief Samuel's report which will be echoed by every nurseryman who desires this country to take no step backward upon an occasion when the products of all countries are in competition. Surely this state of things at Chicago will be remedied at once. There is ample time for wide-awake firms to prepare an exhibit. Doubtless many have intended to do so as soon as the Spring pressure of business is over. Chief Samuel's statement regarding the American Association is in error, because we know of at least one or two members of the association who are already represented by exhibits. The florists will make an elaborate display, and there is no reason why the nurserymen should not have an attractive and interesting exhibit that shall be both varied and comprehensive.

REPORTS from nearly all the states indicate that the prospects for an abundant yield of fruit this year are good. There is much encouragement in this to the nurseryman as well as the fruit grower, for a productive year is needed to restore confidence in the benefits of fruit growing and sustain a demand for nursery stock.

OF GREAT importance to nurserymen is the work of Luther Burbank, of Santa Rosa, California. Mr. Burbank is engaged exclusively in the production of fruits and flowers which are new in the highest sense of the term. They are creations produced by scientific combinations of nature's forces guided by long and carefully-conducted biological study. That we are just at the gateway of scientific horticulture is shown by the fact that limitations once thought to be real have proved to be only apparent barriers. At his experiment grounds at Santa Rosa, Mr. Burbank is making rapid progress in a display of life-forces in plants and has produced startling results from cultivation, crossing, combination and selection. Mr. Burbank's is wholly a private enterprise and the most extensive of its kind. The results of his work are of the greatest interest to nurserymen whose business it is to propagate and disseminate in large quantities, the new as well as the old varieties. Mr. Burbank has succeeded in improving old varieties to almost as great an extent as in introducing new kinds. His work will continue to be watched with interest.

PERSONAL KNOWLEDGE OF NEW VARIETIES.

To the Editor of THE NATIONAL NURSERYMAN:

I think Mr. Charlton's article on the Crandall currant in your March number brings to the surface some facts which would be well to emphasize. We surely need to be careful in taking hold of the baits thrown out labeled "new varieties." They sometimes have a concealed hook attached, which has no value to the biter, except the sting it leaves. Such a sting is sometimes profitable. I have been for the past four weeks trying to find some one who has some *personal knowledge* of the Lincoln coreless pear, and have written to some dozen or more parties, most of whom are catalogueing it and sending out the beautiful plate (half section), but can find no one who has fruited it, or who can say from *personal knowledge* anything regarding its superior excellence. I hope these lines may come before some one who can give the desired information, as I am anxious to find out its superiority. I do not try to "frown it down" unless its excellence *cannot* be established.

Cayuga, N. Y. H. S. WILEY.

THE OUTLOOK IN THE SOUTH.

The present season has been a lively one in nearly all kinds of nursery stock in the South, and the demand has exhausted the supply of most of the prominent kinds. Pear trees of the LeConte and Keiffer varieties, have been heavily planted, noticeably so in Southern Kansas. Peaches have been planted in large quantities all through the South, and particularly in the vicinity of Fort Valley, Ga., and DeFuniak Springs, Fla. Japanese plums have had a wide distribution, and though mostly in smaller quantities than peaches and pears, yet the aggregate has been large. The planting of orange and lemon trees in this state has been larger than common, and the nurseries are generally well cleaned up in first-class trees of citrous stock. The Satsuma orange has been in heavy demand throughout what might be called the extreme northern portion of the citrous belt, and this valuable hardy variety will be in demand again the coming season. Grapes are being planted, and prove profitable in many sections of the South, where, only a few years ago, they were entirely ignored. The demand for Pecan trees still keeps up, and large orchards of them are being planted. Japanese persimmons have proved profitable all through the cotton belt, and with the more careful nomenclature now prevailing in this hitherto badly mixed fruit, the planting of them is on the increase. The winter throughout most of the South has been wet with an entire absence of the damaging droughts that have characterized several previous seasons. In some sections cold weather has damaged the prospects for early peaches, but we think the injury so far has been comparatively light, and that the prospects for heavy crops of nearly all kinds of fruit in the South, taken as a whole, are extremely good. A cold, wet winter in the South (of course, barring damaging freezes) is generally followed by a heavy fruit crop, and our pears, plums, oranges, and most varieties of peaches, promise to yield abundantly the present season.

In the absence of any national calamity that would affect the South, as well as other portions of the country, we think the outlook for the nurserymen of the South is good.

G. L. TABER.

Glen St. Mary, Fla.

GLEANINGS FROM THE NOTES OF AN OLD NURSERYMAN.

GRAFTED CHESTNUTS.—Why are grafted chestnut trees always so scarce? I have just looked over the wholesale price lists of fifty of the leading nurseries of the United States, and can find chestnuts mentioned in thirty of them, but grafted chestnuts in only four; and only two of these firms offer them by the hundred; and on application to them they state that they cannot spare one hundred trees of any size as they are short on all varieties. What is the cause of this scarcity? Grafted chestnuts are in demand, and thousands of them could be sold every year at high prices if the trees could be found, and it seems strange that some of our energetic and intelligent nurserymen do not awaken to the fact and supply the public need. Experiments have shown that good productive chestnut trees are as profitable as any other fruits. Experience has also proved conclusively that it is just as necessary to graft chestnuts as it is apples, pears or cherries in order to secure valuable trees. Such being the case, the question very naturally arises, "Why do not nurserymen supply this demand by producing the trees and offering them for sale?" An easy question to ask, but the only answer that I can find, is "Because they cannot!" They don't know how to do it profitably. It is doubtful if there can be found ten nurserymen in the United States who have followed the business for ten consecutive years of raising grafted chestnut trees for sale. The long time required to produce the trees, the numerous failures and meager successes which attend the work and the very unsatisfactory condition of the profit and loss account of the operations do not offer very flattering encouragement to any one to engage in the business. As a result of a continued line of operations and experiments, commenced by my father about thirty years ago, I would submit the following suggestions:

There is always good demand in large cities for all the large chestnuts of good flavor that can be found, at twenty-five to thirty-five cents per quart at wholesale. At these prices for nuts, chestnut trees will pay as well or better than most other fruits. There is a wide and steadily growing demand for improved chestnut trees and there is not much probability that the supply of grafted trees will ever equal the demand, because they are so hard to produce. This difficulty arises from two sources; first, that of grafting the trees and second, loss in transplanting them. Neither of these difficulties is insurmountable, but they necessitate the exercise of every possible care and precaution from the gathering of the nuts to the transplanting of the grafted trees into their permanent situation. If the roots are cut short or are exposed and get dry, the trees will die. For this reason they should be dug and transplanted in damp or drizzling weather with the least possible amount of exposure. When the nuts are gathered spread them out thinly in a cool dry place, for a week or ten days to sweat a little, stirring them occasionally so they will not heat; then stratify the nuts with damp sand or moss and keep them in a cool cellar until Spring; plant early in light, rich soil, covering not more than one inch deep with very fine earth or sand. The seedlings should be transplanted when one, or at most two years old. It will be at least two years and sometimes three after transplanting before they will be in proper condition for grafting. I prefer grafting them at a height of from four to six feet, by inserting a tongue or cleft graft, in the ordinary way, and securing carefully with waxed muslin. The time for grafting is after the sap has started in the stocks and the terminal buds are well swollen or ready to burst. The scions should be cut early while entirely dormant and kept fresh in an ice-house or other cool place.

Chestnut trees can only be kept in proper salable condition by transplanting them every four or five years. If allowed to stand longer than this the roots become very long and straggling and hard to dig and there is ruinous loss in transplanting them. I have on various occasions seen serious loss in each of the following operations: Several times nearly all of the seed has rotted in the cellar during the winter from unknown causes, after it had been put down very carefully and supposed to be kept under favorable conditions. Once when the seed was stratified in moss it sprouted so early that at planting time it was impossible to get it out without breaking many of the sprouts. One crop was lost by being planted too deep and covered with soil that was a little lumpy, the sprouts being unable to push through. The natural covering for nuts in the forest is leaves. It is often difficult to protect the nuts and young trees from the ravages of mice, and they are never safe until they are two years old or more. The vermin will eat the entire root under ground, and will sometimes destroy a whole block during a winter if their ravages are not discovered and checked. Rough-on-Rats mixed with corn meal and placed about the field is the best remedy that I know. There is almost always from ten to twenty per cent. of loss of life in transplanting chestnut trees under the most favorable circumstances, no matter what their age or condition may be, and if the conditions or circumstances are unfavorable, the loss is more likely to amount to seventy-five or one hundred per cent.

The objection to grafting one year seedlings is that they are generally too small above the ground and root grafts will not answer. The objection to grafting two year seedlings without transplanting is that their tap roots are already too deep and if they are not transplanted before they are three years old there is very heavy loss, when they are moved, and it will then be the loss of trees on which the care and cost of grafting has been

expended. Chestnuts are always slow to recover from the check of transplanting and whether they are one, two, three or more years old when moved, they will not regain sufficient vitality and vigor to be in condition for grafting until after two seasons' growth. From this fact arises one of the many embarrassments in the work. Another serious objection to grafting small stocks is the disinclination of the grafts to make straight trees, their tendency being to make crooked branching heads rather than erect leaders. For this reason it is better to get the stocks up first to a height of six or eight feet and then when headed with grafts of one season's growth they are of saleable size and shape. Another disadvantage in grafting small stocks is in the great number that are killed by cutting them down low, in case the grafts fail to take; but if the larger stocks are worked high and the graft fails, suckers will usually put out which can be worked again the following year. It is claimed by some growers to be practical to bud chestnuts, but all our efforts in this line have been complete failures.

If by starting with one thousand one-year chestnut seedlings and bestowing upon them every possible care and attention for five years, I should succeed in producing two hundred and fifty saleable grafted trees from five to seven feet high and two hundred and fifty second grade grafted trees and possibly have two hundred and fifty mutilated stocks of doubtful value left, on which the grafts had failed, I should consider that the operation had been wonderfully successful. But if the trees are grown and delivered in the best possible condition into the hands of inexperienced planters, with the ordinary treatment which the majority of the trees receive, a very large proportion of them will be lost the first or second season. The planter will be greatly discouraged, and censure the nurseryman severely for the worthlessness of his stock, and the extravagant prices charged for it. Therefore, with every chestnut tree sold, there should be furnished a copy of instructions calling attention to the fact that it is a very difficult tree to transplant successfully, requiring the utmost care to avoid exposure of the roots; the land should be heavily mulched with manure after planting, and the trunks of the trees bound with moss and burlap, and the entire top and trunk syringed frequently and the land watered liberally, through every drought that may occur during the first and second summers after planting. Last spring I transplanted five chestnuts that measured from four to six inches, and hauled them sixteen miles from home by wagon. By observing the above precautions, they all lived and grew finely, showing that chestnuts of almost any size can be raised and moved successfully, if sufficient care and expense are bestowed upon them, and it is certainly an industry worthy of encouragement.

SAMUEL C. MOON.

Morrisville Nursery, Morrisville, Pa.

Among the Exchanges.

MARIANNA STOCK FOR PEACHES.—"My experiments during the last four years have demonstrated beyond question the worthlessness of Marianna stock for peaches. * * * * I have tried early and late Crawford, Oldmixon, Mountain Rose and Smock in Maryland and Delaware, and seedlings in Georgia, and the results are quite uniform. The stock is entirely worthless, and whoever trusts it, expecting to get a fine orchard, will lean on a broken reed. This stock has already been used to a considerable extent, and is still being used, but growers ought to be cautioned against it. Nurserymen like it because the peach takes on it readily, and grows off well at first. After a year or two, however, accidents become numerous, and before the trees are of bearing age the orchards become very ragged and scrubby. Many of the tops overgrow the stocks, and perish in this way. Others which have made a good growth for several years, and in which the root part seems to have kept pace with the top, become yellow and dry up from defective nutrition apparently. This has been the result in three different places in Maryland and Delaware, and the seedlings set on Marianna in Georgia for another purpose and which grew off beautifully for two years, last year showed the same symptoms. I would not set an orchard of peach on Marianna stocks if a man would give me the trees and bind himself to take all their fruit at $1.50 a basket! It would simply be a waste of good land."—EDWIN F. SMITH, in *American Gardening*.

RECENT LITERATURE.

A pamphlet full of practical information, entitled "A. B. C. of Agriculture," has received wide circulation by the publishers, W. S. Powell & Co., Baltimore, Md. It contains much that will cause the planter to reach again for a nurseryman's catalogue.

The official report of the proceedings of the recent meeting of the Western New York Horticultural Society has been issued by Secretary Hall. The proceedings of this society are regarded as of more than ordinary interest and value.

Another of that popular series of books by Professor L. H. Bailey, of Ithaca, has appeared. It is entitled "American Grape Training," and is the outgrowth of a demand for a succinct account of the subjects of grape pruning and training as practiced in the large grape growing regions of the East. Such a work had not before existed. No better authority on this subject could be found than the author, who has been assisted in the preparation of the book by George C. Snow, of Penn Yan, N. Y., William D. Barnes, of Middle Hope, N. Y., and L. C. Corbett, Professor Bailey's assistant at the Cornell Experiment Station. The book is well arranged and handsomely illustrated. New York: The Rural Publishing Co.

The thirty-seventh annual report of the proceedings of the Illinois State Horticultural Society has been issued by the Secretary, A. C. Hammond, of Warsaw, Ill. The volume includes reports of the proceedings of the Central and Southern district societies, and contains 432 pages of valuable information for the fruit grower and the nurseryman. The president of the state society is Henry Augustine, of Normal, Ill., who is also president of the American Association of Nurserymen. The Illinois society is one of the most important in the country.

The first biennial report of the Washington Board of Horticulture has been issued under the direction of the Secretary, C. A. Tonneson, of Seattle. It is comprehensive and contains a large amount of valuable information, general and local.

American Gardening for May contains articles upon the following subjects: "Cemetery Gardening," by O. C. Simonds; "How to Spray," being notes from ten experimenters; "The Development of a Pine Stump," by G. A. Woolson; "Chrysanthemums," by H. Yoshiike; "The Evolution of the Raspberry," by Fred. W. Card; "The Modern Petunia," by L. H. Bailey; "Some New Chrysanthemums," H. C. Vedder: "Horticulture at the World's Fair," by Fanny Copley Seavey; "Taste and Tact in Arranging Ornamental Grounds," by E. A. Long: "Golden Gate Park," by E. A. Long; "Various Opinions About Fruits," by T. H. Hoskins; "Roses for the Gulf States," by Dixie Suna.

The California Fruit Grower is a model trade paper. It covers the fruit producing field thoroughly, with special care, of course, of that most important feature, the California fruit trade. It labors earnestly in the interest of California fruit growers and in return receives the hearty support of the trade.

The Gardeners' Magazine in a recent issue presented a list of new American Chrysanthemums, prepared by M. Barker of Cambridge, Mass.

BEEN LOOKING FOR IT.

L. GREEN & SON COMPANY, WESTERN RESERVE NURSERIES, PERRY, O. "Please find enclosed postal note for $1.00 in payment for one year's subscription to THE NATIONAL NURSERYMAN. We have been looking for such a paper for some time."

SETH WINQUIST, MULTONOMAH NURSERY, RUSSELLVILLE, ORE. "Enclosed find $1.00, for which please send me THE NATIONAL NURSERYMAN. It is just the paper that I have been looking for, and it should receive the patronage of every nurseryman and dealer in the United States and Canada. I wish you unbounded success."

JAMES W. TURNER, AURORA, ILL. "I have received the first number of THE NATIONAL NURSERYMAN, and find it just the thing I was looking for. I enclose $1.00 for subscription."

Ellwanger & Barry will make a great exhibit at the World's Fair of lilacs, hollyhocks, weeping mulberry trees, Japanese maples, variegated tulip trees, almond, cherry and purple-leafed peach trees, five varieties of azaleas and five varieties of rhododendrons.

Among Growers and Dealers.

William Smith of the W. & T. Smith Company, of Geneva, has begun the erection of an opera house in that village which is to cost $50,000. He is also constructing a spacious apartment house in a desirable location in Chicago. These veteran nurserymen, William and Thomas, 76 and 74 years of age, were at the packing grounds at their nursery this spring as usual, working with the others from 6 a. m. to 6 p. m., as energetic as the youngest.

The Charles C. Nash Nursery, of Spring Arbor, Mich., will be transferred to Three Rivers, Mich., where the Carpenter & Nash Company will conduct 100 acres, with Charles C. Nash as superintendent.

Charles Wright, of Seaford, Delaware, a successful nurseryman, has been appointed Superintendent of Pomology at the World's Columbian Exposition.

The Oriental Nurseries of Jackson, Ohio, have been moved to Huntington, West Virginia. The manager is H. H. Conklin.

A valuable horse belonging to S. D. Willard, became frightened on the packing grounds at Geneva, during a thunder storm and after running a short distance dropped to the ground, dying instantly of fright.

George G. Atwood, of Geneva, has disposed of his retail trade to good advantage and hereafter he will devote his entire attention to wholesale business.

The Muncie Nursery Company, of Muncie, Indiana, has been incorporated with a capital stock of $10,000. The officers are A. Lorenze, of Ft. Wayne, president; Evan Weir, vice-president; and R. C. Griffith, secretary and treasurer.

For Sale. An old established Nursery, situated in Blue Mound, Kan., and known as the Cook & Irwin Nurseries, established in 1868, and has a national reputation among nurserymen and the trade controlled is large and first-class in every particular. Packing grounds adjoining the R. R. Station at the crossing of St. Louis & Emporia and K., N. & D. Railroads. No old stock, everything young and growing in value. A great bargain for some one. Correspondence invited and particulars given upon inquiry.

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SEQUOIA GIGANTEA.

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The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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DEPARTMENT OF AGRICULTURE RECEIVED DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., JUNE, 1893. NO. 5.

REFORMATION OF THE TREE PEDDLER.

THE RELATION BETWEEN PRINCIPAL AND AGENT—THE NURSERYMAN RESPONSIBLE FOR MANY PRESENT CONDITIONS—REVISE CATALOGUES TO MATCH PLANTINGS—SUBSTITUTE FEWER SORTS—"NURSERY SALESMEN" INSTEAD OF "TREE PEDDLER"—TREES CAN BE SOLD WITHOUT PREVARICATION—PRACTICAL SUGGESTIONS.

S. M. Emery's paper on "The Reformation of the Tree Peddler," before the American Association of Nurserymen at the Chicago meeting is as follows :

The field is a broad one, operations may be instituted from either side or exposure, the whole ground may not be covered, and the most noxious errors eradicated, but unintermittent effort in this line will result in the improvement and future development of the peripatetic peddler, the man who has heretofore injected much ginger into the nurseryman's life. The tree peddler is like unto a two-edged blade cutting equally each way, and the attempts of the nurseryman to keep financially even with him has, to say the least, prevented both parties from lapsing into a state of "innocuous dissuetude."

How may we best reform him ?

Sheridan's plan for making "good Indians" might be followed, but this has objections, legal and otherwise, and were we to transform him to that state where "carking care no longer frets," the immediate result might be a necessity to provide adjoining cemetery privileges for those who, dependent on him for the conversion of their ware into the "*quid pro quo*," the filthy lucre, that procures for them the means for the sustenance of life, would be lost in the shuffle. We can't kill him, gratifying as it might be to his customers to thus give them the pleasure of escorting the dear remains to their last resting place. We must love him, nurture him, labor with him, in and out of season, in short, *reform him*.

As a starter, why not begin at home ? Principle No. 1 can thus be enunciated : The nurseryman created and must be responsible for the actions of his agent As well might the right arm be severed from the body, without resultant pain or deformity as to sever the intimate relations of principal and agent—nurseryman and peddler. Errors creep into all systems ; ours is no exception.

The first statement made to a customer by an agent, be he a wholesaler, a salaried salesman, or the commissioned peddler, is "I'm selling trees." This statement is followed up by the announcement of the firm he represents, the place of their location, that they were established "B. C." or about that time, that they are the only genuine blown-in-the-bottle, dyed-in-the-wool nursery firm, the only concern that produces all the stock they sell ; their trees do not winter-kill, summer-blight, nor spring-scald ; all stock warranted for two life-times, etc., etc., *ad nauseam*. Failing in any of these statements, the customer pins him down to a revelation of his pedigree, and while the formal printed order may not bear the name of the eminently respectable and ancient firm from whom the goods are supposed to come, the customer has it firmly impressed upon his mind that he is a customer of the firm and not of the agent selling him. And do not deceive yourself; if there is the least thread of business relation between you and the salesman upon which he can predicate a positive agency, he will surely use it, and bind you to the policy he uses to secure sales, no matter whether that policy be upright and legitimate or otherwise. If the order is obtained by misrepresentation, the stock mismanaged in transit, and the customer suffer disappointment, rest assured that you will be held responsible for each and every bill of particulars. If he demand restitution of money, or the adjustment of the order to the representations made him by the agent, how little it meets the case for the firm to refer him to the salesman for satisfaction ; or if, taking advantage of the legal technicality that he may not be a simon pure agent, in every sense of the word, and the point is made to the customer "that you employ no agents," it still avails nothing to bridge the chasm between you and your customer.

Candidly, is it not out of character to attempt shelter behind the slender outlines of a poor devil of an agent ? A practical, sensible mother always had at her tongue's end the answer to the ever-ready excuse of the child, for neglect or carelessness, "I didn't go to do it," the counter statement, "You didn't go not to do it." And so with the nurseryman. Burdened and perplexed with the cares of propagation, and the ten thousand things that arise to make of the business "a demnition grind," he is too prone to leave the salesman to his own resources, and to be thankful for orders gained by any hook or crook. When a plethoric order book full of good fat orders is received, to obtain which lies enough have been told to sink a ship, and in moments of confidential vain-glory he advises you of his methods, do

you say to him "I will not accept these orders," and "You are dismissed from my service?" Not always. You sometimes meekly join in the laugh at the expense of the supposedly ignorant granger, who is not there to enjoy the fun, and who, while open to the charge of ignorance, is rapidly acquiring experience which is sufficiently expensive to be exceedingly valuable in future transactions with the genus salesman. Oftentimes a mild reproof is administered and the agent goes forth in his picturesque tour of falsehood and misrepresentation, expecting his work to lie along the same lines, and that the orders will be taken knowingly and wittingly that contracts made cannot be kept.

Has there ever been a really undesirable article catalogued? When the Transcendent crab and the Flemish Beauty pear are catalogued, is the information added that they are peculiarly subject to blight? Why not? Because it will stop sale. Let the other fellow find that out by trying same as you did, is the catalogue maker's rule of faith.

Why not state this tendency, and farther, that in many localities no other apple or crab will ever fruit, except the Transcendent, and the certain result will follow that you will be short on Transcendents.

The apple planting world is an old one, and pretty much up to snuff and not fooled as often as one supposes. General rules apply to all situations. "The greatest study of mankind is man." The Navajoe squaw weaves from good honest wool and warp a blanket that holds water. The man that predicates success upon a foundation of falsehood, simply invites certain disaster. How long a time does it require to produce from the seed a merchantable apple tree? About two and one-half years will round out and develop the good two-year-old tree, too short a time to warrant the sale of undesirable varieties which crawl into orders under cloak of that infamous clause that ought to open prison doors to those who use it, "the substitution clause." We are personally known to him who on receiving a catalogue with 100 sorts of apples, and when persuaded to buy, concludes his order of 100 trees by selecting one of each kind. To such the substitution clause is a righteous punishment, but when it comes to making the "punishment fit the crime," and the orchard planter, who has a fixed market for Duchess and Wealthy, purchases accordingly, and of your agent, and when the trees fruit they develop into entirely different sorts, worthless in quality, it becomes time to read the riot act to those engaged in such procedure.

How is this work to be avoided? By propagating, by cataloguing, by selling, by substituting fewer sorts.

How few of us are proud of poverty except it be on "assessors day?" A. issues a 32-page catalogue; B. goes him 16 pages better; we double them both, and a 100-page work of art goes out to the world, to encompass which innumerable sorts and varieties are included, worthless to orchardists and all, except it be the amateur experimenter. These catalogues go to the agent, and are studied with the customer, and the direct result is, varieties are sold that can't be supplied from your stock, and you must either substitute or buy from your neighbor and give him a chance to substitute.

Why not revise our catalogues to match plantings on the same principle that tomb stones ought to bear such inscriptions so that when the occupants respond to the last trump, they may not be tortured with the idea that for all these years they have been occupying the wrong pew? When the catalogue is issued, star a few of the best leading sorts, and advise the agent to confine sales to these. Give him a few good arguments to store in his retentive memory. When he sends in orders, scan them closely and note if he is obeying your orders as to varieties sold. It not, drop a few postals to his customers advising them that you can't supply the goods called for in their order, but with his permission, you can supply other sorts as good or better. Select for such treatment orders containing sorts such as you know he is booming and that cannot be supplied, and you will soon break up a disposition to run counter to your wishes. In other words, *take a little interest in your own business.*

And now, Mr. Tree Peddler, with whose hopes of endless joy I seem to be charged, please stand up.

The first reformatory step to be taken will be a change of name, from tree peddler to nursery salesman. Allow no man to apply the obnoxious name to you, either in a business or jocular sense; it is undignified and degrading. You are not on a par with the peddler, who is expected to balance his pack by an abnormal development of the nasal organ, nor are you on the same level as that astute individual, who for a consideration of rags, the older the better, stands ready to McKinleyize the country. These are both estimable gentlemen, but we can get our "hand me downs" and the shining receptacles for the lacteal fluid all the same if their race be incontinently cut off; but half the joy of life would be lost were your peregrinations to be cut off, and the world thus deprived of lucious fruits, umbrageous foliage and lovely bloom. Yours is a high and noble calling, and no man can desecrate it except you be a party to the transaction. If you cease to misrepresent your wares, act in a manly style, "do him not as others do you, but as you would wish to be done by," you will find yourself quoted away above par in the bucolic mind.

Surprise yourself by trying the first day out to confine yourself to "the truth, the whole truth and nothing but the truth." It won't kill you, strange as it may seem, and it's a candid fact that when they "get on to you," you can double your orders. Please do not interrupt me, either of you, by the remark, "you do not know what you are talking about."

I have occupied every relation to a tree that human being can, except standing on nothing and attempting to trace the connection between one's neck and a tree, (there's time enough yet for that; I am still young) and I know the statement "*trees cannot be sold, except by use of prevarication or falsehood*," is absolutely false.

Have you a bright-eyed boy, schooled by a loving mother to absolute truth, and whose development has not yet reached the pass that he is alive to the mockery of the world? You value his good opinion, you know how the big eyes would be turned on you in mute surprise if he knew "papa was telling a story." Do your work from now on as if he were always at your side and competent to analyze and pass on all your statements, and give him no cause to be ashamed of his papa.

If you have no clear convictions as to your course in life and are without the capital to engage in other lines, why not settle this point now, that you will stay with this business, and make of it your life calling? It's a good, a healthy, a wholesome calling, one that will broaden you by contact with the world.

Don't allow the flippant assertion that *one does not have to be posted to succeed*, to effect you; *you can't know too much about it*, and when you have made some failures they have been the result of ignorance and inability to meet argument. Associate yourself with your state and county horticultural societies. Knowledge is catching, and if you expose yourself it will be contracted. Keep your eyes open, study nature, cause and effect, and note the difference on the pages of your order book.

Do you lack confidence? Remember, death first, taxes next, and that he will buy trees, are the three things that always come to the landed owner. Realize that you can work up a business that is permanent and profitable, and that uprightness in dealings will weld to you, with bonds stronger than hooks of steel, the tree planting public which by far out-numbers the balance of mankind.

T. Gower Waterer, of the firm of John Waterer & Sons, Lt'd, of Bagshot, England, was in this city last week, on his way to the Columbian Exposition. This firm deals heavily in hardy rhododendrons, and for many years has made large sales to prominent nursery firms in Philadelphia, Rochester, Boston and other points. Mr. Waterer says that the large importations of the tender varieties has affected the market considerably, but the success that has attended the growth of hardy varieties has tended to restore confidence. He reports a steady advance in the demand for importations.

Colorado consumed over $3,000,000 worth of fruit last year, and the state produced less than one-third of this amount, the rest having been shipped in from California and Utah.

AT THE WORLD'S FAIR.

CHICAGO, May 20.—The vastness of the horticultural exhibit in all its departments makes it seem impossible to describe it, and when one has visited it and revisited it he will find new beauties before unnoticed. The departments include those of pomology, floriculture and viticulture. The pomological exhibit includes all the deciduous and citrus trees, shrub and vine fruits. Those out of season and too tender for distant transportation are exhibited in preservative fluids and represented by wax models. Tasmania, New South Wales and Cape Colony lead other countries in the southern hemisphere in exhibits in this department. Several European countries and many of our own states have kept in cold storage last season's apples, pears and grapes. Russia's collection was gathered from all parts of the empire, extending from Siberia to the lower Volga, France has sent more than 200 varieties of pears and Germany exhibits wax models of every worthy variety of fruit grown in that country. Of such perfect workmanship are these models that it is most difficult for even an expert to detect, by inspection alone, the artificial from the natural specimens. Many tropical countries exhibit fruits which have never been seen except by persons who have traveled in those lands.

Decorative plants and nursery trees commenced to arrive one year ago. A great number of rare and beautiful plants were received throughout the year until cold weather prevented further shipments. Distant lands, as well as the conservatories in our own country, have furnished the supply. Thirty-two fern trees from New South Wales, comprising several genera, and unequaled in size in Europe or America, attract universal attention, while the Elkhorn and Bird-nest ferns from the same country are curiosities in the vegetable kingdom well worth coming a long distance to see. Costa Rica, several states in Mexico, Nicaragua, and Trinidad have large collections of orchids. It would take a voluminous catalogue to name the plants in the greenhouses and horticultural building.

The viticultural exhibit is complete. The three greatest wine producing countries, France, Germany and Spain are far in the lead. Greece, Italy, Hungary Portugal, Algeria, the Argentine Republic, Chili, Mexico, and New South Wales make good displays.

The floriculture display is perhaps one of the most attractive of the entire exposition. It is divided into three sections: The exhibit in horticultural hall of growing plants and flowers; the display of cut flowers in season, and the out-door display of flowering plants and shrubs and cacti. The last section will be in the nature of landscape gardening. Horticultural Hall is 1,000 feet in length with an extreme width of 287 feet. The dome is 187 feet in diameter with an interior height

of 113 feet. The largest tree ferns, palms, bamboos and giant cacti are here exhibited. Front and rear curtains connect the dome with two end pavilions, forming two interior courts, each 88 by 270 feet. The front curtains have glass roofs and are devoted entirely to floriculture. The rear curtains are partly covered with glass, and are mainly filled by the exhibit of green fruits. The end pavilions are for the wine exhibit, a portion of the fruit display, and horticultural appliances, seeds and canned goods.

Around the crystal cave in the dome area are grouped the main exhibits of the three states which make the greatest floricultural display—New York, Pennsylvania and New Jersey. . In the southeast corner of the dome is the greatest cut flower exhibit of the century. Every Tuesday during the Fair a display of cut flowers will be made.

The display on the wooded island will be one of the chief features of the horticultural exhibit. It is expected that next month 50,000 roses and many hardy shrubs will be in bloom there. The lagoon will afford great opportunity for the display of aquatics. There have been planted on the islands and in other parts of the grounds 12,618 trees, 50,614 shrubs, 151,394 hardy perennial, herbaceous, and miscellaneous plants, 136,678 aquatic and semi-aquatic plants, 3,300 ferns, 9,582 vines, climbers and ornamental grasses, 60,000 willow cuttings, 114,920 bulbs and similar plants, and a great collection of native plants, which were used by the carload. Most of the latter are such as grow in the swamps, lanes and woodlands of Michigan, Minnesota, Illinois and Ohio.

Twenty thousand orchids are on exhibition. They come from Mexico, Florida, South America and Africa. They were nearly all cut in the forests and sent to Chicago on the limbs to which they naturally cling. Twenty-six hundred of them were brought from southern Mexico by Dr. Raremba, who claims to have originated the idea of holding a Columbian Exposition sixteen years ago. Some were sent by the agents of the Fair who traveled in tropical countries, and others were contributed by the governments of countries in which they grew. More plants are being added to the collection constantly. One firm of florists in New Jersey will spend $40,000 on its display of orchids.

North of the rose garden on the wooded island is the nursery exhibit. This is comparatively small, but it is creditable as far as it goes. The exposition authorities had water conveyed to all parts of the nursery grounds and black soil to the depth of eight or ten inches was spread. More than $10,000 was expended in preparing the grounds.

Following is a list of the firms making nursery exhibits: Croux & Sons, Paris, France; M. Moser, Versailles, France; J. V. Heckel, Munich, Germany; John Rock, Niles, Cal.; Mrs. A. T. Coronel, Los Angeles, Cal.; H. C. Dillon, Long Beach, Cal.; J. A. Driffill, Pomona, Cal.; Los Angeles Farm Co., Los Angeles, Cal.; H. N. Rust & Son, South Pasadena, Cal.; C. H. Richardson, South Pasadena, Cal.; W. J. Strawbridge, Whittier, Cal.; Blackman & Penrose, Whitewater, Colo.; W. S. Coburn, Paonia, Colo.; J. H. Crawley, Rocky Ford, Colo.; Dall DeWeese, Canon City, Colo.; Charles E. Pennock, Fort Collins, Colo.; Huntsville Nursery Co., Huntsville, Ala.; George Phinney, Evergreen, Wis.; Ellwanger & Barry, Rochester, N. Y.; D. Hill, Dundee, Ill.; E. H. Ricker, Elgin, Ill., Wisconsin Cranberry Association; W. M. Samuels & Co., Clinton, Ky.; Central Experiment Farm, Ottawa, Can.; Provincial Government of Ontario, Toronto.

IS THE NURSERY BUSINESS IN NEW YORK STATE DOOMED?

The Dansville *Breeze* says:

Nurserymen tell us that it is only a question of a few years before the business of raising trees in this state will be a thing of the past. It has been proven beyond a doubt that in some portions of the South, trees can be raised to a much better advantage than here. Owing to the difference in soil and climate the trees will reach a larger growth in two years in the South than they will in three years here. It was at first supposed that the southern trees would not be hardy enough to stand the rigors of northern winters, but this has been proven a mistake, as they grow and thrive as well, apparently as our own grown trees. Just how this is to affect the nursery business here remains to be seen, but it looks as though the hundreds of acres of land that are now devoted to tree raising would within a few years be raising farm crops. Our nurserymen admit that this will probably be the outcome. Here the land that is suitable for this business is scarce, and correspondingly high priced, while in the South much of it can be obtained for a song. Chase Brothers, of Rochester, already have three or four hundred acres in Alabama, in nurseries, and J. B. Morey, Jr. of the firm of Morey & Son of this place, has gone to take charge of it. Chase Brothers are soon to branch out still more extensively down there, and other large dealers in this line will soon follow suit, so there may be a time and that not far distant when the industry that has brought more money in Western New York, and especially this immediate vicinity, than any other will be a thing of the past. We dislike to believe that this is a probability, but it looks strangely like it, and it only gives a hint of what revolutions are in store for this country when the New South gets fairly under way.

The Dansville *Advertiser* says:

One of our most intelligent nurserymen says the nursery business will be successfully prosecuted here for many years; that better stock can be raised here than elsewhere, with a good margin of profit. Just this year prices are depressed, as they often are in other directions, but that is no argument against the stability of the nursery industry here.

Lewis Chase, of Chase Brothers Company, this city, when shown the *Breeze* article said: "That is not true. While there is a tendency to test the capabilities of the South in the growing of trees, there will always be a demand for the trees grown in this state. Planters in the north prefer northern grown trees, and this preference cannot be overcome. The soil and climate of Western New York will always sustain the reputation that they have established for producing superior nursery stock, and, as I said, that stock will always be in demand, not only in this state but throughout the country."

FRUIT GROWING IN MICHIGAN.

AN ADDRESS TO HORTICULTURISTS GIVES POINTS TO NURSERYMEN REGARDING THE DEMAND OF CERTAIN SECTIONS FOR CERTAIN KINDS OF STOCK—POSSIBILITIES OF THE FUTURE OF MICHIGAN—QUESTIONS OF VARIETY, QUALITY, QUANTITY AND ADAPTABILITY.

One of the most valuable discussions of the season was that presented at the recent meeting of the Michigan State Horticultural Society by S. D. Willard, at Geneva, N. Y. His subject was, "The Possibilities of Fruit Growing in Michigan." His treatment of the subject contained matter of interest to many in other sections and was filled with pertinent points by which growers and dealers may profit. He said: "In the economy of nature no one state in this great commonwealth has been so admirably adapted and provided with all the essentials for growing such a diversity of fruit products, while at the same time enjoying the advantages to be derived from markets so easily and economically reached, the demand for which, twenty years hence, no living man of to-day can estimate. Certain it is that the general fruit growing interests are not keeping pace with the increase of the people, who, as they become more highly educated and civilized, will consume in their living a much greater amount of fruit and less of those foods of a carbonaceous character.

"Fruitgrowing has too often been regarded as a sort of sideshow of farming, and treated with a degree of neglect which would only insure failure when applied to any other crops. It has been regarded as a fit field of operation for him who, failing in everything else, might take this up as a last resort; but the successful fruitgrower of this latter part of the nineteenth century requires a combination of practical good sense, with intelligence in his profession, second to that possessed by no other man, no matter what may be his calling. It is a lack of required knowledge and attainment, more than anything else, to which may be ascribed discouragements and crop failures in fruit growing. We want a more intimate acquaintance with all varieties of fruit adapted to our soils and climate, their habits and structure, their diseases and the insect life that preys upon them —in entomology as applied to our business, and we will give you results less unsatisfactory than those that too often characterize the slip-shod orchard culture of to-day.

"We are living in a wonderfully progressive age, in which science as applied to fruit culture may yet play a part we little imagine. Let no man ignore the grand work being done by state and government in our behalf. We suggest, would not a more general intermingling of varietes in our commercial orchards be a step in the right direction? It is said that, so closely allied are the plum and cherry, the pollen of the one will fertilize the other. If this be so, this may in a measure account for annual crops of each in a small orchard planted in alternate rows. When we consider that our experimental stations, agricultural colleges, as well as departments of agriculture at Washington, are all actively engaged in efforts to solve problems of vital interest to the wide-awake fruitgrower, we think we have great reason for encouragement, and one should prosecute this work with great zeal while availing himself of all required knowledge now at his command.

"We would not be misconstrued, however, nor would we wish to mislead any as to the profits in fruitgrowing. It has its downs as well as ups. Low rate of interest means low prices for everything produced, hence war prices should not be anticipated; but we do mean to say that no investment can be made in this or any other good fruitgrowing state, in the way of soil tillage, that will pay a larger percentage, one year with another, than when judiciously expended in growing such fruits as are adapted to the soil on which they are planted.

"Note, if you please, this question of adaptability. It is important; none more so. A disregard of it has been productive of failures beyond computation. We believe so thoroughly in the adaptability of certain portions of your state for growing certain fruits with such unerring success that, were we twenty years younger, we should not hesitate to push some interests of this kind in a very large way, on land now waiting for the work of the skillful cultivator; only to afford returns that can not be over estimated. Nowhere east of the Rockies can the stone fruits, as well as some others, be grown and marketed with the same success of profit as on the east shore of your great lake.

"The merchant must cater to the wants of his customers, and just so with the successful fruit grower. The markets require the very early and late sorts as well as those whose styles fit them for retailing from the fruit stands, and in the production of varieties that meet these requirements, as a rule, look for profitable returns. We would not be understood as ignoring quality, but if compelled to discriminate as between quality and quantity, with style and good handling properties in favor of the latter, we should assuredly cast our ballot in favor of quantity in planting the commercial orchard. To illustrate more fully the idea we wish to convey, let us take the currant; that variety having the strongest foliage, that will best resist the depredations of the currant worm, that will produce the largest crop to the acre, that will make the most jelly from a given amount of fruit, of the most attractive color, and hence will give to the producer the largest returns for his labor, is quite beautiful in appearance, and yet, if to be eaten from the hand or from the table, would be regarded as the poorest in quality of any currant grown (indeed, I should regard it as totally unfit for table use), and yet in my opinion it should rank high in the commercial orchard. I refer to the Prince Albert. For table use, Moore's Ruby, as a red, and

White Imperial, as a white, by reason of their excellent quality, should be found in every family garden.

"In like manner we could go through the whole catalogued list of fruits making selections here and there which, when compiled into an orchard list, we believe would constitute a collection from which the commercial orchardist could figure with a tolerable degree of certainty as to his future possibilities in fruitgrowing. Is this not a practical work for a fruit man of Michigan, thus to compile a list of valuable orchard sorts that can be referred to by future planters as thoroughly adapted to the purposes sought? Sure it is that new interest is being awakened on this and kindred subjects connected with fruitgrowing, and with a soil, climate, facilities, and markets unsurpassed, abundantly accessible, we can but feel that a field is open and ready for a rich harvest to all whose inclination and taste fit them to engage in the most elevating, ennobling, and healthful occupation in which mankind can engage."

NURSERY ENTERPRISE IN SOUTHERN TEXAS.

The nursery business in Southern Texas is pursued under conditions common to but a few general regions. So entirely is this true that a nurseryman coming here with the ideas gained in other localities would soon find himself bewildered by the strange combinations besetting him at every turn. Our climate is unlike any other and must be learned by the operator before he can become competent to deal with its peculiar requirements. I came here forty-two years ago from near Rochester, Monroe County, N. Y. I brought with me the style of horticultural thought naturally growing out of the climatic conditions of Western New York. I tried to put my views into Southern Texas enterprise. I was young and ardent, and I thought that what we did not know in the Genesee country was hardly worth knowing anywhere. But I soon discovered what any one of more forethought ought to have seen in the beginning, and yet what so many men seem so strangely slow to learn, viz.: That climatic conditions must, after all, rule the horticultural questions of every general region.

It would require a volume to detail all that I could say on this subject. So I will only say in general terms that we have been compelled to study the rare distinctions in almost every department of pomology, floriculture and landscape work; also climate has had to govern our methods, and has had to be met in so many forms that I have concluded that a nurseryman who comes here from the north will have to learn quite the entire business over again before he seems competent to deal successfully with his new surroundings.

But, at least Southern Texas has a horticulture—one peculiarly her own. I am glad to say that it is improving every year. We cannot succeed with the varieties or even the races of fruits of which northern field culture is composed. But we have fruits and flowers, collected from every corner of the world, or produced from combinations of our own, that are suited to our own sunny climate, and when they have become thoroughly disseminated among our people, they will become mighty factors in adorning our homes, in multiplying our domestic comforts, in elevating our society, in refining our civilization, and in qualifying our great commonwealth for the high national position suggested by our enormous possibilities.

GILBERT ONDERDONK.

Nursery, Victoria Co., Texas.

TREATMENT OF TREES TRANSPLANTED.

To the Editor of THE NATIONAL NURSERYMAN:

Your valued publication finds one lover in this extreme South, in this almost tropical clime of Florida. I note Mr. Moon's article in the March number on "stripping leaves." It is a well-known fact that in the case of any tree while in leaf, if out of the ground, the roots *must* be well supplied with water. If they are to be stripped or handled in any way, even from the nursery to the packing grounds, the roots must be kept wet. With our orange trees as with deciduous trees, I for best results cut off the leaves in sending long distances. In the case of the peach trees mentioned by Mr. Moon, where the leaves were taken off, they could have been left in the open air until the branches were shriveled up badly, and then by immersing in water until the sap vessels were filled again, the tree would have suffered but little if any injury. But a tree in which the sap vessels have become shrunken through the evaporation of its sap through the leaves, is very different. The vital elements that have been stored up in those sap vessels, the life food of the plants, that is to feed it in its transitory stage of transplanting, has been thrown out on the air—wasted—and the plant, if not dead, must have a sickly life at best, according to the injury thus done, as we so often see. Even with planters, whom we should think ought to know, this question is little understood.

Here in this land of ours (it can hardly be called soil) feeding the tree is as much of a question with us as it is to supply the horse that hauls the plow with its daily rations; and I am not only believing that to raise good trees we must use all the elements that trees take up from the soil—sufficient ammonia makes plenty of wood, and large leaves in nursery and pretty trees—but I believe it wants the phosphoric acid and potash to make it a perfect tree; one that will transplant well from the nursery to the orange grove, and I am practicing that plan of a "complete fertilizer" in the nursery as well as the grove and peach orchard.

Orlando, Fla. JAMES MOTT.

THE CRANDALL CURRANT.

To the Editor of THE NATIONAL NURSERYMAN:

In the March number of THE NATIONAL NURSERYMAN, Mr. John Charlton, of Rochester, N. Y., asks for evidence concerning the Crandall Currant. He asks first, what are its merits? I answer, hardiness both in wet and drouth and freedom from insects, great productiveness and excellent quality of fruit. As to its being new, I can only say that at its introduction it was new to me. I have never scanned its history closely. Mr. Charlton does not think any one with authority or weight will recommend it. As to the qualifications of this witness the court must decide. I have grown it here for six years, as a test with a few plants. I have this year planted, expecting to grow fruit for market. In the six years I have grown it, it has never failed, through all sorts of seasons, to produce good crops of fruit. The fruit grows in clusters similar to a cherry and not as other currants in bunches resembling the grape. The berry is a dark, dull red, almost black; in size about equal to a medium Early Richmond cherry. The flavor is more nearly that of the cherry perhaps than of the currant, yet quite distinct. It cans well, makes good jellies and excellent pies, in fact, it is equal to the sour cherries for any purpose we have tried it. As to its being identical with wild fruit of New York, I think there is some mistake. I am acquainted with the wild fruit of Missouri, Iowa, Indiana and Michigan, and I do not know any that closely resembles this. And I think there is a mistake for this additional reason, that the Crandall is said to be an improvement on the wild currant of the sand hills and bottoms of this country which it does resemble, and I much doubt whether there is any closer kinship between the wild currant of this country and New York state than there is between the wild plum of the two sections, and they are certainly distinct enough.

I fully agree with Mr. Charlton as to the necessity of care in recommending new fruit before trial, but I do not think it advisable to condem a fruit without qualification, nor to endorse it without the same care. THE NATIONAL NURSERYMAN is of wide circulation; it is published at some considerable distance from where I am writing. I am in the heart of what was lately noted on maps as the Great American Desert. Mr. Charlton sat writing his article in the great fruit-producing state of New York, and there is necessarily considerable difference in soil and climate. He may be correct as to the Crandall in his locality. However, I am inclined to think he has not got the Crandall.

Meade, Kan. E. D. SMITH.

GREATLY PLEASED.

T. T. LYON, CHAIRMAN MICHIGAN STATE COMMITTEE, WORLD'S COLUMBIAN EXPOSITION, SOUTH HAVEN, MICH. "I am greatly pleased with the excellent taste and thorough neatness of the number received."



HENRY AUGUSTINE.

One of the most prominent nurserymen in the country is Henry Augustine, of Normal, Ill., president of the American Association of Nurserymen. Mr. Augustine is a veteran nurseryman. In 1867 he established the business of which he has since been the head. A natural talent combined with his practical experience during the last twenty-six years, has made him an authority on the propagation and culture of all kinds of nursery stock.

The firm of Augustine & Co. does next to the largest business in Normal, one of the largest nursery centers of the country. The plant comprises 350 acres at Normal and at Topeka, Kan. The firm imports heavily and its wholesale trade is large. Mr. Augustine is president of the Illinois Horticultural Society, one of the most influential. He is in charge of the Illinois Horticultural display at the World's Columbian Exposition.

TO ADVERTISERS.

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The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance	$1.00
Six Months	.50
Foreign Subscriptions	1.25
Six Months	.75

Advertising rates will be sent upon application.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., JUNE, 1893.

INVESTIGATING CROP FAILURES.

A series of experiments of great interest to fruit growers generally, and especially to those of Western New York, is in progress in this city, under the direction of M. B. Waite, of the pomological division of the United States Department of Agriculture. With few exceptions the apple and pear orchards in the western section of this state have not produced enough fruit during the last five or six years to pay the interest on the land. Repeated requests for an investigation as to the cause of the failure of those crops, led to the experiments begun last year and now renewed by Mr. Waite at Secretary Morton's order. Mr. Morton thinks the failures have been due to heavy rainfall, which has prevented pollination. Mr. Waite began his experiments here last month in a pear orchard at Ellwanger & Barry's nurseries. "The result of the experiments last year," said he in response, to an inquiry, "was to establish the fact that some trees are possessed of stronger powers of self-fertilization than others, and that in order to obtain the best results there should be a variety of trees planted in an orchard. This orchard which is notably prolific and flourishing, contains a great variety of pear trees including Duchess, Anjou, Bartlett, Clairgeau, Howell, Seckel and many others; the Seckel by the way is one of the trees that possess strong self-fertilizing powers and it will do better even if standing alone than most other pears will under similar circumstances. It is to continue the experiment in regard to fertilization that bags are tied over the blossoms. They are merely to keep out insects which might convey the pollen from one blossom to another. By observing the fruit which sets in the clusters covered by the bags and comparing it with that on the same tree not covered, an estimate can be made of the value of fertilization by insects."

Mr. Waite has made a careful examination into a similar failure of the orchards of Virginia within the past few years, and his investigations resulted not only in discovering the causes but also the remedy. In Virginia there are a great many isolated orchards. In one case several thousand trees are growing together. The orchard is well cultivated but the crops have repeatedly failed. Two or three years ago Mr. Waite visited this particular orchard and took with him the pollen of trees from Washington. He tried the experiment of artificially fertilizing some of the trees with this pollen and the result was a good crop wherever the pollen was used. That same fall the owner of the orchard was advised to try grafting other varieties of apples into his orchard. He took the advice and last year had an excellent crop. Similar experiments made in other sections of the Old Dominion brought similar results, and the farmers and orchardists have learned the value of scientific pomology.

THE *Post Express* of this city is making an earnest appeal to the citizens to wage war upon the caterpillar pest which threatens to despoil the shade trees of the city. Professor M. V. Slingerland of Cornell University, has suggested, at the request of that paper for a remedy, that the most effective method by which the white-marked tussock moth can be checked is to destroy the frothy egg masses before the eggs are hatched. Every egg cluster destroyed means 300 less of the greedy caterpillars. One result of the warning is that twenty-one pupils of one of the public schools gathered within 24 hours around their homes and the school buildings over 9,000 egg clusters, thus destroying 3,000,000 embryo caterpillars. This is a much better way than waiting until the pest has begun its work and then attempting to remove it by spraying. The same plan might be practiced in the case of fruit tree pests of many kinds. It is not a new plan, but it is one that is apt to be neglected in these days of spraying machines.

THE Society of American Florists has succeeded in obtaining from the Traffic Association of Express Companies the following concession on rates for the conveyance of plants:

> Strawberry or vegetable plants when boxed, crated or packed in any way so that they can be loaded with other freight without damage, prepaid or guaranteed, will be carried at the same rate as trees and shrubs, which is the general special rate for produce between points where such specials exist, and between points where no such special exists they will be taken at 20 per cent. less than merchandise rates.

An effort will be made to have all plants placed on the same footing as nursery stock. Some express companies have already interpreted the ruling as including all plants.

TEXAS is coming to the front rapidly as a fruit producing region. As will be seen by reports from the Southern portion of the State, published in another column, growers are having much success where earlier efforts failed. It is probable that the tendency among planters there will be toward the use of nursery stock grown in that region, but there is opportunity for nurserymen of other sections to demonstrate the value of special lines of stock grown elsewhere for use in the Southern States. That it will be necessary to do this is shown by the large increase each year in the planting South and West.

WESTERN New York fruit growers fear that the frost on the night of May 18th, following a three days rain, did considerable damage to the cherry, peach and plum crop. Apples were not advanced enough to receive serious injury. Bartlett pear blossoms were not open and consequently little or no damage was done them. The frost extended along the New York Lake shore and in Eastern Michigan. In Northern Illinois climatic changes in April seriously injured the fruit crop. In other sections of the country there are prospects of an abundant crop.

ALL eyes are on Chicago. There will be much to interest all. The indications are that the nursery exhibit will not be as extensive as it might have been, but the nurserymen will find much instruction in the exhibits in horticultural hall, on the lagoon and on wooded island. While many nurserymen will make an effort to attend the meeting of the American Association, there are a considerable number who find it inconvenient to leave their business at this time, and they will therefore visit Chicago at a later date.

SHRUBS of Daphne Mezereum and Rhododendron maximum have been discovered growing wild in the vicinity of Rochester, recently, and the incident has been of considerable interest to local botanists. But something of the novelty was dispelled by the statement of Robert J. Fleming, soon after the discovery was made, that he saw Daphne Mezereum growing wild in the town of Greece, near Rochester, in 1880, and that he believes the specimens are not native but were developed from seed carried by birds from a neighboring nursery.

THE spring season has been prolonged by cool weather, so that while it has aided nurserymen in transplanting their own stock it has at the same time encouraged others to plant. Late sales therefore have been more frequent than usual. This has benefited those growers who deal directly with planters. Those having an agents' trade have not been so much benefited because most agents close their canvassing for spring orders about the middle of March.

IT is proposed that the Horticultural building at the World's Columbian Exposition remain a permanent structure and that the contents be purchased as far as possible, to form a nucleus of a botanical garden for Chicago. This seems to be a commendable proposition, and one that should receive encouragement from all who reside in or near Chicago. It is a rare opportunity.

IN the May number of THE NATIONAL NURSERYMAN G. L. Tabor is quoted as saying that Le Conte and Keiffer pears have been heavily planted in Southern Kansas. It should have read, Southern Texas.

Among Growers and Dealers.

Olmsted, Olmsted & Elliott, the well known landscape gardeners of Brookline, Mass., have prepared plans for the improvement of Washington park, this city.

George S. Josselyn of Fredonia, N. Y. who was so successful in disseminating the Fay current, is now pushing the Red Jacket gooseberry, the Esther grape and the Rockwood grape.

Professor B. E. Fernow of the division of forestry, Department of Agriculture, is in Europe. He is on the programme for the Chicago meeting of the American Association of Nurserymen, but he will not return, probably, in time.

The Ohio Lemon & Citrus Nursery Co., of Cleveland, capital $20,000, has been incorporated by F. A. Kendall, A. P. Baldwin, Charles Hanford, J. S. Van Epps, S. S. Safford and W. H. Cleminshaw. The company will raise tropical fruits on 100 acres of land in Tulare county, Cal.

Charles E. Greening of the firm of Greening Brothers, Monroe, Mich., has designed an account book especially for nurserymen doing a retail trade. It has an ingenious method of grouping and co-relation of accounts which enables the proprietor to refer at once to any feature of a transaction.

S. M. Emery of Lake City, Minn., will assume the duties of his new position as director of the Montana Experiment Station on July 1st. He has assured his many friends that his work in that direction will not cause him to lose interest in the progress of the nursery business. Mr. Emery will preside during a portion at least of the session of the World's Horticultural Congress at the Columbian Exposition in August.

Mr. Koster, of Koster & Co., proprietors of the Hollandia Nurseries, at Boskoop, Holland, has been visiting nurserymen in this country during the last few weeks. He passed through Rochester recently on his way from Chicago to New York. He reports a light demand for choice stock. Koster & Co., produce a high grade of stock and secure a high price for it. The firm made a fine exhibit at Ghent this year.

Among the Exchanges.

THE APRICOT.—The nurserymen throughout the state report there has not been such a demand for apricot trees for planting in over eight years as there is this season. The apricot has slowly become again a popular deciduous fruit. In some districts, as in Ventura and San Luis Obispo counties, the planting of apricot orchards runs into hundreds of acres, and is beyond anything ever known there. In Los Angeles, San Bernardino, and particularly orange counties, there are in nearly every locality a number of land owners, who are going into growing prunes and apricots on a large scale. There are many good points about apricot growing. Experience shows that the orchards of apricots, which have the dews and breezes from the ocean bear heavier and better fruit than those in dryer interior localities. The general culture of the fruit for 10 years in Southern California proves that it is a ready bearer, and has no off years. It bears very early and about once in three years has an enormous crop, if the orchard is properly handled. The trees grow rapidly, respond quickly to care, and are extremely strong and tenacious of life, but we have no tree that demands more pruning than the apricot.—*The Rural Californian.*

RECENT PUBLICATIONS.

The prospectus of a new French horticultural publication entitled, *L'Horticulture Francaise*, has been issued. It will be published semi-monthly, at Lyon, France, by L. Cusin, and will comprise a compendium of gardening features.

An interesting publication is *La Pomologic Francaise*, the monthly bulletin of the Pomological Society of France. Its reports of the proceedings of the society and its descriptions of varieties are of much value to all who are interested in the production of fruits. The May number contains hints by Mr. Leon De La Bastie, president of the society, on the best fruits for the amateur who wishes to cultivate popnlar varieties in his own garden.

The second edition of Prof. L. H. Bailey's Horticulturists' Rule-book retains all the good points of the original edition, and adds many new recipes, formulas, and facts, although it has been condensed into a somewhat smaller space. Every insecticide and fungicide which has gained prominence in the country is given, together with descriptions of all the leading diseases and insects of fruits, vegetables and flowers. In this direction the book is an epitome of all recent experiment and practice. It is one of the most invaluable guides to the modern methods of spraying for insect and fungous troubles.

A highly interesting volume handsomely printed and bound, descriptive of the queen of flowers, is "The Rose," by the late Henry B. Ellwanger, with an introduction by George H. Ellwanger, who has dedicated the volume to his father, George Ellwanger, the senior member of the firm of Ellwanger & Barry, of this city. Wherever the rose is considered by well informed persons, the names of Ellwanger and of Barry will be associated with it. Mr. George H. Ellwanger in his introduction to the present volume says that so comprehensively and intelligently has the theme been treated in the monograph by one who was eminently qualified to render it justice, that little remains to be said of the rose in general. A host of new varieties have appeared in the decade since the original work was produced, and this fact has led to the addition of their descriptions to the catalogue. "We are, perhaps, no nearer now than when the present volume was written in being able to decide upon the loveliest species and variety of the rose," says Mr. Ellwanger. "Many of the fine old kinds are comparatively neglected, if not entirely lost, jostled and thrust aside by the increasing horde of newer aspirants. As producers of new roses the French continue in the lead; the English are next. America has contributed largely those kinds suitable for forcing under glass. A blue rose has not yet been produced, But it is not improbable that in the evolution of this favored flower, a variety with a pronounced bluish cast, at least, will some day smile upon its sisterhood, the result of the skill of the hybridizer, or the work, perchance, of the wandering bee." The entire volume is the work of an artist. A valuable feature is the exhaustive catalogue of varieties. New York: DODD, MEAD & CO. Rochester: THE DODGE AND BROWN CO.

From Various Points.

T. C. Smith, a prominent fruit grower of Adelaide, South Australia, is on his way to this country to make a study of fruit pests and diseases, and the means of suppressing them. He will converse with practical growers and state officials. He will cross the continent and sail from New York for London, and will visit India in the interest of the canned, dried and fresh fruit trade.

"There is considerable kicking over the black-knot law" says the Trumansburg, N. Y. *Sentinel.* It has in some instances worked to the damage of owners of plum trees. One case we have in mind in which a commissioner girdled a valuable variety from which the owner was intending to cut grafts. The law as it stands now gives the commissioners too much power. The cost will prove no small item in the next town budget."

Since the present administration came into power the total number of removals in the department of agriculture for all causes, including all resignations, whether voluntary or called for, have amounted to 133, while during the same time the total number of appointments have been 63. Secretary Morton regards these figures as an all-sufficient answer to the statements recently made that the new appointments were equal to or in excess of the removals.

At the recent meeting of the Vaughn Bay, Washington, Horticultural Society, there was almost a unanimity of opinion in favor of fall planting of trees as against spring planting. The entire meeting was devoted to this subject and at the end this resolution was adopted: "That the Vaughn Bay Horticultural Society recommends its members to plant their fruit trees as early in the fall as they can be obtained from the nurseries, to finish the work as speedily as possible, but if delayed by bad weather, to continue it in the winter."

Otto Locke, of New Braunfels, Texas, says on the subject of fruit culture in Southwestern Texas: "It is enerally believed that here in Southwestern Texas no good fruit succeeds, in fact, that no fruit trees are growing at all, except peaches and plums; but this

impression is a mistaken one, as there does not only grow much and good fruit, but it is of especial good flavor, of beautiful color, and ripens several weeks earlier than in Eastern and Northern Texas. Thirty years ago no potatoes could be grown in South-western Texas. The plant grew, but no potatoes, until the early ripening sorts as "Early Rose," etc., were introduced, and now there are often two harvests in one year. The same can be said of fruit culture, if the proper kinds are planted, those suitable for the climate. The time is not distant when we will raise fruit for export instead of importing it as we are doing now. The reason for the supposition that no fruit grows here lies in the fact that until now little or no experiments were attempted with the various kinds; all trees planted were brought here from the North; planters were careless. Every summer, often in the spring, the nursery agents arrive with their beautifully illustrated catalogues and price-lists, or they have gigantic fruits in bottles, raised expressly for the purpose in California. These agents are so importunate that they receive orders for the sake of getting rid of them. A census bulletin shows that of all trees planted in the United States half die the first year, and before they reach three years one half of the remaining ones die, and it is universally accepted that after 20 years only five per cent., or one out of every 20 trees is alive; here in South-western Texas, scarcely one out of 40.

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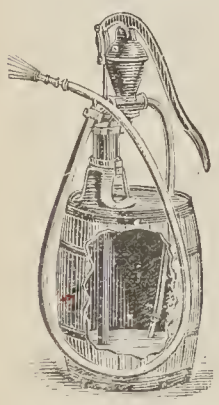
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U.S. DEPARTMENT OF AGRICULTURE RECEIVED * DIVISION OF STATISTICS *

VOL. I. ROCHESTER, N. Y., JULY, 1893. NO. 6.

THE AMERICAN ASSOCIATION.

Eighteenth Annual Meeting at the World's Columbian Exposition.

Important action taken on various subjects—Rules of nomenclature of the American pomological society adopted as those of the association—Unjust discrimination at the columbian exposition remedied—Declaration in favor of the forest reserve system—World's horticultural congress—Freight classifications—Papers on trade topics.

The eighteenth annual meeting of the American Association of Nurserymen was held at Chicago June 7th and 8th. The sessions were held in Assembly Hall, in the annex of Agricultural Hall, on the World's Columbian Exposition grounds Promptly at nine o'clock on the morning of the 7th the meeting was called to order and the routine business was quickly transacted. Early in the session the following officers were elected: President, Colonel U. B. Pearsall, Fort Scott, Kan.; vice-president, W. F. Heikes, Huntsville, Ala.; secretary, George C Seager, Rochester, N. Y; treasurer, N. A. Whitney, Franklin Grove, Ill; executive committee, Irving Rouse, Rochester, N. Y.; W. J. Peters, Troy, O; D. S. Lake, Shenandoah, Ia.

It was unanimously decided to meet next year at Niagara Falls.

Following a discussion on the subject, these resolutions presented by C L. Watrous, of Des Moines Ia., were adopted:

Whereas, There has been, and still is, in connection with the nomenclature of fruits, much of duplication, sensationalism and crudeness, as well as occasionally more or less of coarseness, and even of vulgarity, and

Whereas, The American Pomological Society has for many years been engaged in the effort to simplify purify and elevate the same—an effort in which more recently it has been actively seconded by the Pomological Division of the National Department of Agriculture, and

Whereas, We deem the catalogues of nurserymen one of the most effective means of influencing the practice of the public in such matters, therefore

Resolved, That we regard it as highly important that all nurserymen, whether members of this Association or otherwise, in the framing of their catalogues, and in their other communications to the public, adhere strictly to the rules of practice put forth in the now generally approved "Rules of Nomenclature" of the American Pomological Society.

Resolved, That to justify the very reasonable and proper ambition of the devotees of pomology it be recognized as a science in the approved sense of that word, to the end that its dignity, together with thorough and generally approved system may be regarded as indispensible.

At the session on Thursday morning the following resolutions, presented by Professor Bailey, were adopted:

Resolved, That it is the sense of this Association that pomology and viticulture be held to be co-ordinate with floriculture, and that the latter be not recognized as a distinct department. Also

Resolved, That the council of administration be requested to repeal the local rules which now interfere with the exhibition of perishable fruits; and

Resolved, That the administration be requested to enact such reasonable rules and regulations as will enable exhibitors to place perishable fruits upon their tables immediately upon their arrival at the offices of the various express companies.

The treatment of exhibiting nurserymen and horticulturists at the hands of the administration of the exposition received severe denouncement on all sides. President Augustine said that he shipped to the fair grounds a quantity of cut flowers on Monday night, June 5th, from his nurseries at Normal, Ill., only 130 miles south of Chicago, by the direct route of the Illinois Central railroad, which enters the grounds, and yet these flowers did not reach the exhibition tables until Wednesday morning, and then only through Mr. Augustine's personal solicitation. The delay was caused—as it had been in the case of all other horticultural exhibits—by the policy of the management of the fair, which seemed to be to throw hindrances in the way of everything horticultural. Mr. Augustine regarded it as a colossal piece of indignity.

J. M. Samuels, chief of the Department of Horticulture, said he had endeavored by every means in his power to secure greater consideration for the horticulturists at the hands of the council of administration. Several members spoke of the good work done by Mr. Samuels in behalf of horticulturalists, and upon motion of S. D. Willard, of Geneva, a vote of thanks was extended to Chief Samuels.

It was suggested that a committee composed of Professor L. H. Bailey, of Ithaca, N. Y.; C. L. Watrous, T. V. Munson, of Denison, Tex.; S. D. Willard and H. N. Albaugh, of Tadmor, O., wait upon the council of administration with a view of seeking relief. At the suggestion of Mr. Wright, Chief Samuel's assistant, it was decided that all the members of the Association accompany the committee on the proposed visit. This was done, and the council of administration assured the nurserymen that the evils complained of would be remedied. One of the principal grievances complained of was that in addition to the delay which

was disastrous to perishable fruits, every pound of fruit offered for exhibition was required to be weighed outside the grounds, and a toll of six cents per pound was exacted. This was remedied at once.

The following resolution was adopted unanimously :

Resolved, That the American Association of Nurserymen expresses its appreciation of the earnest and efficient services of Hon. H. E. Van Deman in the interests of American Pomology during his term of office as Chief of the Pomological Division of the United States Department of Agriculture.

J. O. Barrett, secretary of the Minnesota State Forestry Association, presented the following resolutions which were adopted :

Whereas, Forestry scientifically managed is essential to promote atmospheric humidity and water conservation whereby agriculture and horticulture in all their identical branches are promoted, therefore

Resolved, That we reiterate our former declarations in favor of the forest reserve system as outlined by the American Forestry Association, and hereby again avow our purpose to give it our undivided support in every state wherever possible in our country.

Resolved, That we respectfully urge our congressmen to give this matter the early and especial attention it deserves for the ends of forestry on such a scale of vastness as the needs of the people necessitate.

Colonel Pearsall called attention to the World's Horticultural Congress, which is fixed for August 16th, 17th, 18th and 19th, at the Columbian Exposition grounds, and suggested that a committee of seven be appointed to represent the Association at that congress. President Augustine appointed as such committee Col. Pearsall, W. F. Heikes, C. L. Watrous, Irving Rouse, J. E. Ilgenfritz, C. M. Stark and F. G. Withoft.

Z. K. Jewett, of Sparta, Wis., brought up the subject of insurance from hail. H. N. Albaugh said that the difference between the nurserymen's and florists' business was so great that it had been found impracticable to apply to trees those principles of insurance which affected glass in greenhouses. The amount of loss could be fixed definitely in the case of the florist ; not so with the nurseryman. Col. Pearsall was of the same opinion.

A motion to make George P. Peffer, of Pewaukee, Wis., vice-president in place of Z. K. Jewett, on the ground that Mr. Jewett was not the only nurseryman in Wisconsin, was adopted.

J. Cole Doughty, secretary of the Jewell Nursery Company of Lake City, Minn., called attention to the fact that the western classification of freights differs from the eastern classification in that it releases to the valuation of $5.00 per 100 pounds. The two classifications should be made to conform. As it is, the western dealer is required to pay the excess.

The following papers were read or presented to the secretary for publication in the official proceedings, after which the meeting adjourned until next June :

SMALL FRUITS IN WISCONSIN.

M. A. Thayer's paper stated that the growing of fruit in Wisconsin has been considered experimental, and it is so now to a great extent with apples, pears, plums and cherries, but with small fruits it has been demonstrated beyond a doubt that with the selection of best hardy varieties and proper cultivation, trimming, mulching and protection, Wisconsin produces larger yields per acre of finer fruits than any other state in the Union. In Wisconsin it is necessary to adopt methods of cultivation almost unknown in warmer climates, on account of short warm summers and rich quick soils. With eternal vigilance comes such success as 300 bushels of Ancient Briton blackberries from a single acre, and an average of more than 200 bushels per acre from a large plantation ; 1700 bushels from less than five acres, etc. The essentials in producing plants like this are a warm, rich, well drained soil, thoroughly prepared, hardy vigorous plants, well set, severe pruning and thorough cultivation. Winter protection is an absolute necessity for small fruits in Wisconsin. The choice among small fruits in that state rests on Warfield strawberries, Gregg black raspberries, Marlboro and Cuthbert red raspberries, Downing gooseberry, Ancient Briton blackberry.

EFFECT OF FROST ON STOCKS AND TREES IN TRANSIT—HOW TO TREAT THEM AND HOW TO PREVENT FREEZING.

HON. H. N. ALBAUGH, TADMOR, OHIO.

The Irishman, who fell from the fourth story of a building, declared it was not the fall that hurt him, but the lightin' so quick. So it is not so much the freezing that injures the roots of trees and plants, in transit, as the sudden thawing out and especially in the bright light of day.

Last winter we had a continuous cold spell in January, all through Ohio, and the states eastward, when the thermometer reached twenty below zero, at its lowest, and was on several successive days from the zero mark to ten below. In fact, the continued freeze had lasted for several weeks, until the ice on still ponds and reservoirs was a foot thick, a very unusual thing for Central and Southern Ohio. During this continued cold spell, our importations of foreign stocks reached New York, and were forwarded via. Canada and Northern Ohio to us. One car was a refrigerator, and one a common car. They arrived at our place the morning the thermometer marked twenty below, and were at once unloaded and placed in our large tree cellars. The boxes were undoubtedly frozen solid, or at least, frost had pervaded every part of them. They were allowed to remain in the boxes, without disturbing them till the regular February thaw, a month later, and were then unboxed and found in excellent condition, and no stock we ever planted made a better growth.

That roots frozen and then thawed out in bright sunlight will be irretrievably injured, all will admit. So, even a heavy frost on the roots of trees accidentally or

carelessly left out over night, at digging time, and allowed to be thawed out by the next morning's sunshine, generally ruins them. But what protection must trees in transit have in the ordinary shipping season of the fall and spring, is the question. Trees packed in tight, paper-lined boxes with plenty of packing material around the roots are generally perfectly safe, even in mid-winter, in transit in an ordinary car if allowed to thaw out in the boxes, on arriving at destination. A cellar is the best place to store such goods awaiting a thaw.

Trees packed in bulk, in a close car, with plenty of straw, (half rotten straw, even if mixed lightly with fresh stable manure is best) will produce a considerable degree of heat, that it will take a very low degree of temperature to freeze. The only trouble in bulk goods is that the unloading must generally be done at once, on arrival, and here the greatest danger exists if the weather has continued cold up to the time of arrival. Trees packed in bales, as usually put up in straw, moss and sacking, are not easily frozen, as there is more or less heat generated in such a car by the contents, and often when the car is opened at destination the heat escaping is quite perceptible. In bulk packing, the bottom of the car can be covered with straw or rough littering from the stables, several inches deep, and then the roots kept eight or ten inches away from the sides—filling the intervening space with straw, tightly, keeping the roots of the trees as far as possible away from the car doors—and covering all with a good coating of straw, and they will be safe in any reasonable fall or spring weather, where zero or thereabouts is not reached, or the cold continues but a few days at a time.

Too often the consignee asks that sufficient trees to make two car loads be crowded and jammed into one big car to save freight, thus giving no chance for proper bulk packing, and thereby loses more in the end, by the process, than is gained by saving space.

The hurry and jam of the nursery business, crowding a whole year's work into a month or six weeks, each spring and fall, also militates against as careful packing as should be done. Then, to get and *keep* just the right man—true, tried and trusty—to oversee the packing, is no easy matter. Muscle is always on the market; brains less frequently, and such matters of necessity, in the rush, can not be attended to by the proprietors, but must be delegated to the ordinary laborer, usually. In my thirty-five years continued experience in the nursery business, I have shipped trees in all directions, in almost all sorts of weather, have received trees by car load, in bulk and in boxes and in all manner of packing, good, bad and indifferent, and very seldom, indeed, have I lost trees by frost.

When there comes a heavy frost, late in spring time, and the blossoms are out on the trees, how common a thing it is to hear the complaint, "fruit all killed this morning, not a peach, cherry, pear or apple left," and yet a crop of fruit generally comes up smiling after such weather. So, too, often consignees are frightened at freezing weather, when their goods are in transit and are ready to cry out, and do cry out "all is lost!" when but little, if any, damage has resulted.

In conclusion, allow me to say, pack all your shipments carefully as possible, be it either in bulk or box. Don't skimp your packing material to economize space, and thereby save freight; let loose a tracer after them, in a couple of days after you have bid them good bye, and leave the rest to Providence and careful handling at destination. If receiving freight during freezing weather, be careful to have the goods thaw out in the dark; give them several days if possible to do so, and above all don't fire a red hot letter into the shipper, on the instant, before you have had time to properly get in and handle the goods, but be a little economical, both with heat and cold, in your temper, and remember it takes lots of growling, scolding and "cussin" to kill a nurseryman or a tree dealer.

Does it pay the nurseryman to make exhibits of fruits at state and local fairs?

C. L. Watrous, Des Moines, Iowa.

By way of reply to the question set me for discussion, I should say, "it all depends." If the nurseryman is a competent pomologist, able to correctly select and name his varieties, a fine display at a state or local fair will be a valuable object lesson to the public and a credit to the exhibitor. If he is incompetent or careless, a display by him will harm the public as well as himself, and therefore ought not to pay the exhibitor.

If the nurseryman means to do business long in the land, it will assuredly pay him to build, broad and deep, a foundation of public confidence in his ability to furnish good stock, true to name. It will pay any nurseryman whose business is largely with fruit trees and plants, to devote his days and nights to such critical study of pomological authorities and examples as may make him a competent pomologist, for at least his own botanical region. Having gained such knowledge, there would seem no cheaper or more effectual way of advertising it to his customers, than by showing (whenever it can be done without unreasonable expense,) large lists of fruits carefully named, at state and local fairs.

Every nurseryman has an opportunity to be, and ought to be a leader and guide in all matters pomological. He should be the one to stand at the masthead, and his eye the first to discern and test all promising novelties appearing on the horizon of his sphere. Having tested, he will confer a benefit upon the public, and increase the confidence of the public in himself and his business, by showing at fairs the results of his tests, and

by being on hand with explanations. Such work is educational in the highest sense, and the man competent to lead the public aright in his own line of activity must and of right ought to reap from that public for such services, both gratitude and dollars.

This is all based upon the idea that the nurseryman means permanently to devote himself to his business on the lines of integrity and justice, taking some pride and pleasure in the educational and elevating side of his business, as well as in gathering in dollars. If he means to carry on a short and merry game of skinning both friend and foe, and of burning the ground over as he goes, a different conclusion might be warranted.

HORTICULTURAL GEOGRAPHY.

In his paper on this subject which was further defined as observations on "Ultimate Results of the World's Fair Exhibits of Fruits and Flowers," Professor L. H. Bailey presented a list of the apples on exhibition from New York, Illinois, Wisconsin, Washington and New South Wales. He continued :

The first thing which strikes one in glancing at these lists are the great differences in lengths, or in the numbers of varieties. Of course, the lengths of the lists are not accurate measures of the relative numbers of varieties in the different states, because the collections from the different regions were made with various degrees of thoroughness ; yet it is true that the eastern states, because of their age and the great diversity in soils and climates and methods of colonization, possess a great number of local varieties. New York undoubtedly leads the states in the actual variety of apples cultivated within its borders, and Pennsylvania is probably entitled to second place. Yet no part of our country has developed endemic or peculiar varieties so quickly as Wisconsin and Minnesota, the first fruit lists of those states already containing many varieties of apples and other fruits which are unknown outside that general region. All this indicates that fruits, like other plants, quickly adapt themselves to new conditions through variation into adaptive varieties—a conclusion to which a closer study of the above lists brings strong additional evidence.

In the above lists there are 99 New York varieties, 13 in Illinois, 55 in Wisconsin, 19 in Washington and 13 in New South Wales. Taking the New York list as the basis we find that 60 per cent. of the Illinois varieties occur in it, less than 20 per cent. of the Wisconsin, about 50 per cent. of the Washington, and about 20 per cent. of the New South Wales varieties. These figures show that Wisconsin and New South Wales have an apple flora very different from that of New York, and moreover, these floras are peculiar,—that is, different also from the apple floras of other geographical regions. The Wisconsin–Minnesota apples are more unlike the New York apples in type than the Australian ones are, and they have been developed very largely from an independent stock. If we were to examine the Quebec apples critically we should find them to be nearer the New York apples in type than the Wisconsin apples are, but we should notice a decided influence of European types. From 50 to 60 per cent. of the varieties of Illinois and Washington in the above lists are in the New York list, yet the apples of Illinois and Washington are much unlike.

And here we come upon a subject to which nurserymen should give particular attention. While Illinois grows many New York varieties, the leading kinds of the Illinois-Missouri region are different from the leading kinds in the East. The realm of the Baldwin, Rhode Island and Greening, King and Hubbardston is practically bounded by Lake Michigan on the west, and we pass southwestward into the land of Ben Davis, Willow Twig, Winesap and Janet, and northwestward into the domain of Duchess, Wealthy and Wolf River. But in the far north-west—Idaho, Oregon, Washington—the leading types are drawn from both the East and the Illinois-Missouri region, with the greater part representing admirable but somewhat local apples in New York state, Newtown Pippin, Blue Pearmain, White Winter Pearmain, Æsopus Spitzenberg, Swaar, to which must be added, from the prairie region, Rome Beauty, Ben Davis, Winesap and Janet. But the similarity of this remote apple flora to eastern floras ends with the names of the varieties, for the apples themselves are very unlike ours. They have been modified by climate until they are larger, longer and more conical, frequently marked by prominent ridges at the apex, less firm in flesh and often somewhat inferior in quality. To all interests and purposes, many of these are distinct varieties from their parents in the East, and they afford as distinct and unequivocal cases of evolutionary modifications as the most hypercritical can wish to see. The Newtown Pippin probably affords the best instance of rapid modification of any American fruit. It has always been a local and captious apple in New York state, where it originated ; yet in the Piedmont region of Virginia it is the leading apple, known as the Albemarle Pippin ; in the far northwest it is again the leading apple over a great territory, and in New South Wales under the name of Five Crowned Pippin, it is still again a dominant variety. Yet in each of these four geographical regions, the variety attains a specific character which it does not possess in the others. The Albemarle Pippin differs from the true Newtown in a less heavy and somewhat poorer flesh and in poorer keeping qualities ; and you can all compare the enormous, deep yellow, softer, angular-topped specimens of the Pacific north-west and New South Wales with those of New York. Reviewing these calculations, we find three prominent facts : the whole body of the Wisconsin-Minnesota apple flora is different from that of

New York; the prominent types of the Illinois-Missouri region are different from the prominent types of New York, while many secondary varieties are the same in both; the apples of the Pacific north-west, while transplanted from the East, have developed away from their parent stems.

The entire horticultural exhibition seems to force conclusions similar to these upon my mind; and it greatly strengthens the conviction which has been strongly growing upon me in recent years that the study of the adaptation of varieties to geographical and local conditions is a most imperative demand in horticultural operations. I therefore look with much distrust upon the promiscuous distribution of varieties over great areas. If I should not plant a Baldwin orchard in Illinois, I should hesitate in like manner to plant a Ben Davis orchard in New York. I believe that the days of the nursery business which aims to feed the whole country are numbered. We shall develop more nurseries like those in many parts of New York and other eastern states, which attempt to supply the stock which is particularly adapted to their geographical regions and which are content to leave other lands for other men. Climate and environment must eventually force the nurseries into nearly as narrow limits as the adaptability of the stock which they grow, although this contraction will follow some distance behind the settlement of the limits of adaptability of the varieties themselves. The European nurseries have had this experience to an important extent.

Right here you may wish to cite me to the excellent displays of rhododendrons and azaleas upon these grounds, as proofs that nursery stock can be successfully grown far away from the geographical area in which it is to mature, for these plants, with unimportant exceptions, are grown in Europe. But I shall contend that the most important reason why these plants do not succeed well in America is because they are European grown. It is always said that the American climate is not adapted to the rhododendron, but with all due respect to those much older than myself, I must still decline to believe the statement. One of the most important species of cultivated rhododendron is native to our Alleghany region, and evergreen ericaceous plants in variety are indigenous over much of our territory. The trouble is that we have failed to grow with much satisfaction the varieties originated in England and on the continent, and we have then generalized this failure into a maxim that our climate is uncongenial to rhododendron culture, albeit that the very type from which many of these varieties have come grows luxuriantly in our woods. There is not the slightest reason to doubt that if American nurseryman were to originate varieties of rhododendrons we should soon have sufficient adaptive kinds to meet all our needs. Even the cultivation of the apple never became an unqualified success in the United States until we produced American varieties. All success in the cultivation of raspberries and strawberries was delayed until we had American species or varieties. It was once thought that we could not grow our own apple stocks, but we now know that the American stocks are as good as the French and are probably superior to them. All the older men in this audience can remember when it was thought that the American climate would not allow of successful rose growing out of doors, but now rose gardens are common and there are more prizes for us among American novelties than among the European. I have the fullest confidence that there is not a more promising field for the faithful and patient American nurseryman than in the evolution of an American race of rhododendrons and azaleas.

As I now see it, the greatest ultimate good which shall come from this great exhibition is the lesson that our country is too large and too varied to allow of random and indiscriminate methods and promiscuous distribution of varieties. With the increasing competitors and the refinements of life which are inherent in the coming years, we must confine our efforts to increasingly narrower areas, and must bring larger rewards from more concentrated enterprises.

MANAGING NURSERY EMPLOYEES.

J. Jenkins, Winona, O.

From the fact that efficient and intelligent work is required in our business, and that the margin of profit of late years is ruinously small, this conundrum that our worthy secretary has propounded is indeed a difficult one. No better way for managing nursery help has yet been devised than the plan followed by all our large commercial nurseries of using the working force in gangs under the leadership of efficient foremen.

Whatever economy we may use in other directions, it seems to be a settled fact that we must have efficient foremen as leaders in the several departments, profit or no profit. The several foremen should be under the supervision either of one of the proprietors or of a very efficient general manager, capable of keeping in his mind from day to day, and from hour to hour indeed, the progress of the work. Once in the day, either in the morning before the general force begins work or in the evening after hours, all the foremen should report their progress to the general manager, making suggestions of their requirements and the work of the succeeding day allotted to each, as far as possible. An efficient general manager of a large force will have time for but little else than a constant oversight of all parts of the business.

Profit-sharing or giving of a percentage to some of the leading foremen has been tried to some extent, but it is subject to many complications and misunderstandings. Our nursery stock companies by inducing the most efficient leaders to take shares in the association will

probably come the nearest interesting such leaders in a way to draw out the best work.

There will be among a large force of men a number that are disposed to shirk and clamor for short hours, etc. These should be spotted and dropped out as rapidly as possible as they are an injury to the other workers; their grumbling tending to spread dissatisfaction. It is better to raise the wages of the best workers and put them on the hunt of workers of their own stripe, which they usually prefer—as an industrious, energetic hand dislikes to work with a shirk. In this way the quality of the force employed may be raised to a higher standard.

Owing to the great variation in the amount of help really needed at different times in the year, those nurserymen who are situated so that they can secure transient help for a few days only, as they usually can near our large cities, are to say the least, fortunate. Those who live in more isolated localities are obliged to keep on slates a large amount of what might be termed stock work, such as repairs of buildings, clearing of old blocks and rubbish, fencing, ditching, digging cellars and preparing storage caves, repairing greenhouses, etc., to turn the force on at any time or all times, where the growing stock does not receive attention.

LARGEST OF ITS KIND.

THE IMMENSE SMALL FRUIT PLANT ESTABLISHMENT OF A. L. WOOD AT BRIGHTON, N. Y.—AN INCREASE OF ONE HUNDRED AND FIFTEEN ACRES IN TWELVE YEARS—BUSINESS BUILT UP ENTIRELY BY MR. WOOD—ORIGINAL VARIETIES.

We present with this issue a frontispiece illustrating the residence and grounds of Allen L. Wood, the largest grower of small fruit plants in the country. Mr. Wood has always made a specialty of this business and his success is evidenced by the fact that in twelve years he has built up his immense business. In 1881 he began with one acre near his present location. He found a demand which caused him to increase the size of his plant at once. So successful were the results of the first two or three years' business that he made arrangements for doubling the capacity of his grounds. He has continued to do this from that time.

Mr. Wood's nursery is located in the town of Brighton just outside of the city limits of Rochester, in a most desirable section both because of its proximity to excellent transportation facilities and its favorable soil and climate for the purposes desired. The nursery comprises one hundred and fifteen acres of the most suitable land in this vicinity. Among the buildings on the grounds are a large packing shed and a large mailing shed. Another packing shed and a mailing shed will be built this year. There is also a large trial bed in which new varieties are tested. This is an important feature of the establishment. Mr. Wood grows all the new varieties of small fruits, including such favorites as the Greenville strawberry, the Red Jacket gooseberry, the Royal Church raspberry, the Kansas raspberry.

To be the largest grower of small fruit plants in the country means a great deal and when one learns that Mr. Wood sends out tons of small plants at one order he realizes the extent of the business. Mr. Wood's facilities are such that he can fill within 24 hours an order for 100,000 plants. His entire business is wholesale. He intends this year to construct a large root cellar by means of which he will be able to ship orders at any time. He does an enormous mail order business and in addition has extensive contracts with large retail catalogue dealers. He supplies most if not all the small fruit plants called for at Geneva, N. Y., sending this year at one time 15 carloads to that center. He prepared 5000 express orders for one Canadian firm, and packed over 20,000 mail orders and several thousand express orders for James Vick's Sons this season.

Mr. Wood is producing a new variety of blackberry and a new variety of gooseberry, both of which promise to be important additions to the lists. He will place them on the market as soon as he can arrange to have a stock on hand. He employs from thirty to forty men in the conduct of the nursery, and keeps constantly on hand a full stock of the standard and newest varieties. No other grower in the country on so large a scale makes a specialty of small fruit plants. Mr. Wood also makes a specialty of transplants of all kinds of small fruits.

The demand for small fruits increases each year, and if there is any one industry that should be given greater encouragement and more thoughtful investigation generally, it is the culture of small fruits. Prices are remunerative and the business is found profitable when properly conducted. The need of energetic, industrious, skilled small-fruit growers never was greater than at present, and the advantages offered the planter at the Woodlawn Nurseries, in Brighton, are unsurpassed.

The Nurserymen's Protective Association of the United States held its regular annual meeting at the Sherman House, Chicago, on June 7th. There was no business transacted except approval of the executive committee's report for the year's operations. The following officers were elected: President, J. S. Josselyn, New York; vice-president, C. L. Watrous, Iowa; secretary, Thomas B. Meehan, Pennsylvania; treasurer, A. B. Whitney, Illinois; executive committee, J. S. Josselyn, George H. Thomas and A. D. Pratt, of New York. The next annual meeting will be held at Niagara Falls.

GIUSEPPA SADA, VIA PRINCIPE UMBERTO 18, MILAN, ITALY. —"Your very splendid 'THE NATIONAL NURSERMAN' (June number) reach me now. My hearty thanks for it. Such an unrivalled publication is worthy of the largest favour among horticultural trade. Please write the cost for one year subscription and advertisement enclosed."

Among Growers and Dealers.

Ethan A. Chase, of Riverside, Cal., is in the city.

George Arnaudeau, of the Andre LeRoy Nurseries, at Angers, France, visited Rochester nurserymen on his return from the World's Fair.

M. A. Thayer, an abstract of whose paper before the American Association meeting is given in this issue, has done much in his capacity as president of the Wisconsin State Horticultural Society, to advance the interests of horticulture in his state. The origin of the plant distribution in Wisconsin had its inception three years ago, when on Arbor day Mr. Thayer, in an address to the school children of his home in Sparta, offered to give to each child who would come to his farm, two raspberry plants. Mr. Thayer expected that but a dozen or two at the most would respond to his invitation. He was greatly surprised the following day to receive calls from about four hundred pupils who walked between three and four miles to receive the plants. Such was the interest awakened at his own home that Mr. Thayer determined further to test the matter by generously donating 6000 plants to be distributed under the auspices of the State Horticultural Society, to 1,000 children living in the state who would observe Arbor day. The interest taken in the matter became almost universal throughout the state and the 6,000 plants were entirely inadequate to the demands of the pupils. Mr. Thayer added over 3,000 plants more to his first donation. So great was the success resulting from the first distribution of plants that last winter Mr. Thayer offered 30,000 plants to be given to 5000 pupils in the state and such has been the interest taken that as high as 700 applications have been received by him in a single day.

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COLONEL U. B. PEARSALL.

One of the most popular nurserymen in the country was chosen as the president of the American Association of Nurserymen at the annual meeting in Chicago last month. Colonel Pearsall has long been known as a representative type of the enterprising Western business man.

U. B. Pearsall was born July 17th, 1840, near Owego, N. Y. At the age of 18 he moved to Wisconsin, and engaged in the lumber business. He volunteered May 14th, 1861, as a private in Company "H," Fourth Wisconsin Volunteers, serving in the ranks until July 1st, 1862, when he was promoted to the position of 2d lieutenant of his company. He was afterwards promoted from time to time, being colonel of the Forty-eighth Wisconsin Volunteers at the time of his muster out, December 30, 1865. He was brevetted brigadier-general March 13th, 1865, for meritorious services during the war. At the close of his service he settled near Fort Scott, Kansas, where he now resides. He has held there the position of county-treasurer, mayor of Fort Scott, a city of 15,000, and many other positions of trust.



COLONEL U. B. PEARSALL.

He has been actively engaged in the nursery business since 1880. He is now secretary and one of the principal stockholders of the Hart Pioneer Nurseries of Fort Scott, Kansas, which is one of the leading firms west of the Mississippi River. This firm has about 600 acres devoted to the growing of nursery stock of various kinds, and bears a high reputation among nurserymen generally. Colonel Pearsall is also secretary and treasurer of the Western Association of Wholesale Nurserymen, which position he has held for the past two years. He is an experienced presiding officer, an able speaker, and thoroughly conversant with the nursery business in all its phases. He is earnestly devoted to the business; he is well known, possesses good social qualities, and has the friendship and esteem of his brother nurserymen.

Looking back over the long line of predecessors one finds an unbroken record of able and faithful presidents and there is assurance that Colonel Pearsall will preserve the high standing already established.

The National Nurseryman.

C. L. YATES, Proprietor RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
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ROCHESTER, N. Y., JULY, 1893.

THE ASSOCIATION MEETING.

The eighteenth annual meeting of the American Association of Nurserymen was not as productive of results as some of its predecessors, chiefly on account of the overshadowing influences of the World's Fair. But, doubtless, most if not all who attended were well pleased with the plan which enabled them to be present at the meeting and see the Fair on one trip. From 75 to 100 members attended the two sessions.

One of the most important steps taken was the adoption of the rules of nomenclature of the American Pomological Society as those of the Association. This result is due directly to the efforts of Hon. H. E. Van Deman of the Division of Pomology of the United States Department of Agriculture, and the convention did a graceful thing in thanking him by formal resolution for it. Mr. Van Deman presented the importance of the subject much in the same form in which an article by him appeared in the NATIONAL NURSERYMAN recently. The American Association of Nurserymen and the American Pomological Society working together in this matter should produce the desired results.

The papers, as usual, were upon subjects well selected and of great interest to the trade.

There is little doubt that there will be a large attendance at Niagara Falls next year, and that the meeting will command the undivided attention of all who are present. The location is near the largest eastern nursery centers, and western members will find it convenient to combine the trip with their regular eastern visit.

SOME WORLD'S FAIR RESULTS.

Visitors to the World's Columbian Exposition involuntarily remark: "What a pity it is that these handsome buildings must so soon be torn down and these exhibits be removed!" The problem of heating the immense buildings in winter is an almost insurmountable objection to continuing the exposition. The cost would be too great, especially in view of the losing venture the undertaking seems destined to be, from a financial standpoint.

But already there are plans for preserving prominent features of the exposition. As is well known, it is proposed to leave the administration building, horticultural hall and the art gallery as permanent structures. The immense manufactures building, the largest in the world, has been purchased by the Santa Fe railroad Company, which will transfer it to Kansas City where it will be converted into a union station. Some enterprising Californians are advocating the removal of as many of the exhibits as possible to the Pacific coast and establishing at San Francisco during the winter a continuation of the great exposition. The estimated expense of this undertaking is $1,500,000 to $2,000,000. It is doubtful if this plan will be executed.

But there are practical results already assured which show the benefit of an exhibit at the fair. One of the most extensive and attractive exhibits is that of the Boskoop, Holland, Nursery Association, represented by C. H Joosten, of New York city. The exhibit is contained in twelve large beds. They present a fine appearance on wooded island. The assistant superintendent of the forestry exhibit of the state of Oregon has requested the privilege of purchasing all the rhododendrons and azaleas in the exhibit for the purpose of sending them to the Pacific coast. Doubtless other similar results will be recorded.

CHANGE OF DATE PROPOSED.

Since the meeting of the American Association the question of changing the date of meeting to a more advantageous time has been proposed. It is argued that the present date is at a time when nurserymen generally are busy with the accounts of the spring business and with active preparations for the fall trade; and that therefore they can ill afford to spare the time required to attend the meeting.

It is suggested that the date be changed to the early part of December, when it is believed the nurserymen would attend in much larger numbers. An alteration of the by-laws is necessary to effect the change.

THE nursery exhibit at the World's Fair is not in line with the grandeur which characterizes most of the exhibits. Still there is a nursery exhibit, and perhaps, after all it is sufficiently large for the general observer. It was intended at first to locate the exhibit at the west end of Midway Plaisance, upon each side of the promenade; but this space was appropriated for soldiers' camps. The exhibit was finally placed on a smaller

spot on the south side of Midway Plaisance, near the Illinois Central tracks. The fact that the exhibit of a French nurseryman is on the outer edge and the only one seen as one passes along the promenade, together with the fact that the entire plot is about large enough for one man's exhibit, leads the general observer to believe that the French tree-grower is the only exhibitor. But if one enters the plot other displays are revealed.

WESTERN NEW YORK ORCHARDS.

M. B. Waite of the division of vegetable pathology of the U. S. Department of Agriculture has so far proceeded with his investigations as to the causes of the non-fruitfulness of Western New York orchards as to warrant the chief of the division, B. F. Galloway, in predicting that the ultimate result of the inquiry will be the restoration of the fruitfulness of those orchards providing orchardists and nurserymen heed the suggestions of the department. An article by Professor Galloway on the subject will appear in the forthcoming report of the Secretary of Agriculture :

Under the head, "Work on Pear Blight, the Pollination of Pear and Apple Blossoms, etc.,'" the report will say : "The investigations on the above subjects, which were placed in the hands of Mr. Waite, have been for the most part confined to the field. While no important discoveries bearing directly upon the prevention of blight have been made, some interesting and valuable results have been attained through a study of the relation of insects to the disease in question. It was pointed out in my last report that insects play a very important part in disseminating the blight germs. In fact, it seems doubtful now if any other really important means of distribution exists. This intimate connection between insects and the disease suggested a series of experiments, which were carried on at Brockport, N. Y. The experiments were designed primarily to ascertain if exclusion of insects from pear flowers would protect the latter from blight. The question as to the necessity of their visits for pollination was a secondary one, being considered only as a possible barrier to the adoption of any method of treatment which would wholly or in part exclude the insects from the blossoms. The work proved, as briefly set forth in my last report, that all flowers from which the insects were excluded were protected from blight, but, as also mentioned, certain varieties of pears failed to set fruit in these cases. This discovery, the importance of which was not fully realized at the time, led to others which seemed to plainly indicate a fact hitherto generally overlooked by horticulturists, viz : that certain well-known horticultural varieties of pears, such as Bartlett, Anjou, Winter Nellis, etc., are incapable of self-fertilization. In other words, in order to secure a good crop of fruit on any of the foregoing trees it was necessary for their flowers to receive pollen from some other variety. This discovery opened up a wide field and suggested numerous experiments bearing on questions of considerable importance to fruit-growers. It is unnecessary to go into details of the subject here, it being sufficient to briefly describe some of the more important lines of work and the results they brought about.

"In the spring of 1890, and thereafter at frequent intervals, the division received complaints from the firm of Franklin Davis & Co., Baltimore, Md., to the effect that a large pear orchard owned by the Old Dominion Fruit Company, and situated on the James river, near Scotland, Va., had for a number of years been unfruitful. It was thought by Mr. Davis that the unfruitfulness might be due to blight attacking the flowers or to diseases affecting the trees. Early in the spring of the present year Mr. Waite was authorized to visit the orchard and make such observations as might throw light on the cause of the trouble. It was found that the orchard consisted originally of 20,000 standard Bartlett pear trees, about five-sixths of which were still living. The orchard was planted seventeen or eighteen years ago, and although yielding fairly remunerative crops for the first few bearing years, it has been almost a dead loss during the past six or seven seasons. Several diseases were found in the orchard, blight being among the number. The general failure of the orchard, however, could not be satisfactorily accounted for by these causes, consequently attention was turned to the pollination of the flowers. A large number of the flowers were bagged and many others were pollinated by hand. The hand pollinations consisted in the application to the pistils of pollen from the following sources : (1) From the same flowers. (2) From another flower of the same cluster. (3) From a different cluster on the same branch. (4) From another tree of the same horticultural variety. (5) From another tree of a different variety. The flowers in the foregoing experiment had all their stamens removed previous to the hand pollinations. The results of this work, although carried on with a comparatively small number of blossoms, agreed with those obtained the previous year at Brockport, N. Y. No fruit whatever was formed where Bartlett pollen was applied to its own pistils even though it was taken from a separate tree. On the other hand, wherever the pollen of another variety was employed a high percentage of fruit was obtained. There seems no reason to doubt that the unfruitfulness of this large orchard is due largely to its isolation and to the fact that it consists, with less than a dozen exceptions, of Bartlett trees, which are incapable of self-fertilization. In other words, there is not sufficient pollen of the right kind in the orchard or in the neighborhood to fertilize the immense number of Bartlett flowers, and consequently little or no fruit is

formed. The remedy in this case seems to be simple, viz., the introduction of other varieties either by top-grafting, or by both. This plan will be carried out during the coming winter, and if successful and the orchard is brought up to its full fruiting capacity, the company estimate that their annual income will be increased more than $10,000.

"In order to corroborate the results obtained in Virginia, Mr. Waite was sent to Rochester, N. Y., immediately after his return to Washington. Rochester was reached before the pear flowers had began to open, and a large number of experiments along the same lines as those in Virginia were begun. The work was carried on in the orchard of Ellwanger & Barry, where every facility was afforded for making a thorough test of the matter under consideration. In addition to the work at Rochester, similar experiments were carried on with apples at Brockport, N. Y. Mr. Fairchild also made a number of tests at Geneva with both apples and pears. As a result of all this work it was shown that about two-thirds of the commonly cultivated pears are more or less incapable of self-fertilization. In the case of the apple the well-known varieties seem to be more commonly self-sterile than the pear. An examination of cross and self-fertilized fruits show sufficient differences to enable one to decide that the latter rarely occur in nature, and that even those which are capable of self-fertilization are generally cross-fertilized, or might even be said to prefer foreign pollen. The cross and self-fertilized fruits are frequently quite different in appearance; the difference in the size and number of the seeds is still more striking.

"Mr. Waite gives tentatively the following general principles as a result of this preliminary investigation.

(1) The majority of the cultivated varieties of pears and apples require cross-fertilization in order to bring about successful fruitage. By cross-fertilization is meant the transfer of pollen from a different horticultural variety and from a different individual of the same variety.

(2) Bees and other insects perform the work of cross-fertilizing.

(3) The weather at the time of flowering has an important influence on the visits of bees and other insects and through these upon the setting of the fruit.

"The practical application of the foregoing principles will be plainly apparent to horticulturists. For example, large solid blocks of varieties known to be wholly or partially self-sterile should not be planted without introducing kinds known to be active fertilizers. Of course, judgment must be exercised in the selection of pollinating varieties, otherwise there may be discrepancies in the time of blooming which will render them valueless so far as the object in view is concerned Careful tests will also be necessary to ascertain what varieties have pollen of the greatest potency for the fertilization of the sorts which it is wished to grow."

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SEVEN ACRE FIELD OF ROSES.

STORRS & HARRISON COMPANY, PAINESVILLE, O.

The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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U.S. DEPARTMENT OF AGRICULTURE RECEIVED DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., AUGUST, 1893. NO. 7.

PAINESVILLE.

THE HOME OF THE LARGEST ROSE-GROWING ESTABLISHMENT IN THE WORLD.

ONE HUNDRED AND FIFTY THOUSAND ROSES IN A SINGLE BLOCK—A SEVEN-ACRE FIELD IN FULL BLOOM—OVER ONE THOUSAND ACRES UNDER NURSERY CULTIVATION—ANNUAL PLANTING OF ONE MILLION STOCKS—TWENTY-EIGHT GREENHOUSES—TWO HUNDRED AND FIFTY MEN EMPLOYED.

The nursery business of the Storrs & Harrison Co. was commenced 40 years ago by J. Storrs & J. J. Harrison under the firm name of Storrs & Harrison. Stock was grown in a small way for a local retail trade. The company was incorporated in 1881 with a capital stock of $100,000. This amount was afterwards increased to $150,000. The present officers are: President, J. J. Harrison; vice-president and general manager, W. G. Storrs; assistant general manager, W. P. Storrs; treasurer and superintendent of greenhouses, Robert George; secretary, J. H. Dayton The main offices and grounds are situated two miles east of Painesville on the line of the L. S. & M. S. R. R. and extend for two miles along the shore of Lake Erie. The soil along the lake is a stiff clay, admirably adapted to the production of standard and dwarf pears, plums, etc. The clay runs off into the muck beds that have made Lake county famous for its onion production and that grows to perfection certain varieties of ornamental trees and small fruits. South of the muck lies the sandy and gravelly loam ridges that have made the Western Reserve celebrated for its successful farmers and diversified farming. All the clay and muck soil is thoroughly underdrained, much of it at a cost greater than the original cost of land. It is now producing superb blocks of trees that formerly furnished a few loads of marsh hay during the season. The company now owns 620 acres of land nearly all under cultivation. In addition they hold under lease, running from 3 to 10 years, 485 acres, a large portion of which has been underdrained. Stock is disposed of entirely through direct sales at wholesale to nurserymen and florists, and to planters at retail through catalogues, no agents being employed. The value of advertising and attractive reliable catalogues was early realized and the policy then adopted of advertising through local papers and small lists has been steadily pursued until the Storrs & Harrison trees, plants and seeds are well and favorably known in every state and territory in the United States.

The annual nursery planting is now upwards of 1,000,000 fruit and ornamental tree stocks, besides thousands of shrubs, hardy plants, etc., and the seeds sown for hedge plants, forest seedlings, etc, In the item of shrubs is the annual propagation of 50,000 Hydrangea. Over 100 acres are devoted to grape vines and small fruits. All the new and old varieties of grapes, raspberries, blackberries, strawberries, gooseberries, currants, etc., are grown in quantity, 600,000 root cuttings of blackberries being planted in one lot last spring. The ornamental department has always received special attention, no firm in the West attempting the variety or quantity, the aim being to keep pace with the ever-increasing demand for more and better trees in larger variety for ornamenting not only private grounds but for the decorations of public grounds, parks, cemeteries, etc. A small greenhouse for propagation was built soon after the firm started. From this the greenhouse department has developed. There are now 28 large greenhouses with over 60,000 feet of glass, supplemented by a large amount of hot-beds, cold and propagating frames. The houses are largely heated with steam and they are mostly new or are rebuilt in the most approved modern manner. Grape vines, evergreens, etc., for transplanting into nursery rows are propagated largely under glass. A full line of tender and hardy greenhouse and bedding plants is grown and annually distributed among the florists and planters of the United States by mail and express, the yearly production being about 250,000 plants.

Roses have always been a strong feature and their propagation and sale made a leading specialty. About 500,000 are propagated in frames, grown in greenhouses and sold from pots every year, the sale of strong nursery-grown hardy rose plants averaging 175,000, one of the most magnificent sights in the nursery being a seven-acre field of hardy roses in full bloom.

The firm has always realized the importance of facilities for the prompt packing of orders and for winter storage. Additions and enlargements of cellars and packing houses have been made from time to time until the firm is now using over 12,000 cubic feet of cold storage and is erecting this season a mammoth frost-proof cellar with double brick walls enclosing a space 84 x 122 feet and 16 feet high. To this will be attached a packing house 43 x 95 feet, amply supplied with all appliances for the quick and accurate packing of orders An abundance of water is furnished packing grounds

and houses by windmills and steam pumps. About 175 men are employed through the season. This number is increased to 250 during packing and planting. A few of the yearly orders are for 150,000 feet of lumber for tree boxes, 10 cars of baled moss and excelsior for packing, 500 tons of coal for greenhouses; 200,000 catalogues are issued for retail trade; over $12,000 is paid for postage stamps for catalogues and seeds, etc., sent by mail. In the seed department a specialty has been made of Yellow Globe Danvers onion and one of the best strains in the world produced by years of careful selection; 1,000 bushels of onions were planted for the seed crop of 1893.

The extent of the nurseries of this company is better appreciated when seen than when described. There is a single block of pear trees of 500,000, a block of 800,000 plums, 300,000 cherries, and 350,000 yearling peaches. Two hundred bushels of peach pits have been planted for this season's budding.

The company grows largely ornamental trees, Norway maple, silver maple, Carolina poplar, golden-leaf poplar. It sold 70,000 Carolina poplars last spring.

PAPERS ON TRADE TOPICS.

Following are additional papers on topics of interest to the trade, presented at the recent meeting of the American Association of Nurserymen in Chicago:

THE IMPROVEMENT OF NURSERY STOCK.

T. J. Lacy, Washington, La.

It gives me much pleasure to note the improvement in nursery business during the past fifty years. Then there were but few nurseries in the United States, and those very small, now they may be counted by the thousands and many of them with hundreds of acres. Nearly all of the orchards then were seedling trees of poor quality and apples sold for the low price of ten to fifteen cents per bushel. No one thought of planting a large orchard as it would not pay—with that kind of fruit.

Fifty years ago blackberries, raspberries, and even strawberries were thought of only as wild fruit, and grapes were considered as belonging to foreign countries, and only to be consumed by the rich. In the North and West, all this has since been changed and nurserymen have brought up the fruits adapted to that climate to great perfection; but in the South it is quite different, especially in the far South, near the Gulf of Mexico, where northern fruits do not succeed well. There the improvement in fruits commenced much later, but it has made rapid strides. Since the railroads to the Pacific, and steamships to China and Japan have enabled us to get fruit trees to suit our climate, we have made wonderful improvement in a very few years, and with care and attention we have plenty of good fresh fruit all the year. But we must not rest satisfied; we must remember that we live in the age of the greatest improvements in the world's history, and we, as nurserymen, must not lag behind. Though we have done well and improved in every way, there is still much to do, much to learn; therefore, let every nurseryman make the best stock of the best varieties suited to his own locality; it will be a guarantee of what can be done in that part of the country, will increase the confidence of every one interested in fruit growing, and will improve nursery stock in all our fair land.

SHOULD WHOLESALE PRICES GO TO PLANTERS?

D. A. Porterfield, Traer, Ia.

Should wholesale nurserymen send their prices to planters? We have heard the tree dealer and tree agent discussed more or less at these meetings, and some have even gone so far as to say we should hire good agents to do our selling and not depend on dealers; some of us have been trying this plan, and when we send a man out to sell nursery stock it is very annoying, to say the least, for that man in order to sell two dollars worth of stock to have to let customers take time to look over six or eight wholesale price-lists, and then have to compete with the lowest of them, besides paying freight. Last spring one of our men went to a farmer who wanted a few evergreens, and the first thing the farmer did was to bring out six or eight wholesale price-lists for him to compete with; he got the order but had to sell the stock for less than it was worth.

We do not object to the nurseryman sending his prices to whomsoever he pleases, but we do not think he should send them prices so low that we could not purchase from him and sell at a margin. There are not many orders sent in, for the agent who goes to the farmer gets the order in spite of the wholesale lists; but it tends to demoralize the trade, and, in fact, we know of no other class of men that are so reckless in sending out prices as are the nurserymen. The dry-goods or clothing man would not think of selling goods to any but the dealer, and we cannot understand why the nurserymen should; or, at least, why he should not sell to the planter at a small advance above his wholesale lists. We do not believe in monopolies or trusts, nor do we think the treemen should combine, but we do think we could make it more pleasant for others, and just as satisfactory to ourselves, to use judgment in the matter of advertising. We know that in order to win we must advertise to a greater or less extent, and in order to do this, we must tell the people what we have and how we are going to sell it; but a farmer is a man who would take better care of a tree that he paid twenty-five cents for than one he got for ten cents. We do not believe in getting two prices from them, but we cannot afford to

sell a man one hundred trees at the same prices we would sell a dealer one thousand. We think the scheme of selling direct to the planter is a failure, we must either wholesale or sell through agents, and, in any case, we must depend on one another more or less, so that if the eastern nurserymen persist in sending out low prices to the western planters, the western nurserymen will have to quit buying from the East.

This is an age of improvement, and we believe the nursery business can be transacted, as any other business, in a businesslike way, and we can make it an honorable business. We hope to see the time when any man can feel proud of the fact that he is in the nursery business.

RHODODENDRON AND AZALEA.

I would like to direct the attention of the Waterers or other hybridists to the great value of Rhododendron maximum and its congeners—flowering as they do at a time when shrub-flowers are uncommon. I saw an old English lady in a Trenton market this morning, with a select bunch of varieties of R. maximum, from a large flowered white—through two shades of delicately shaded pink—to a red as deep as the lighter varieties of R. arboreum. If such as these were hybridized with R. caucassicum stramineum, (said to be yellow) or if any of the hardy kinds could have their pollen saved for five or six weeks to work the maximums with, I think a very valuable race of late-flowering Rhododendrons would result—hardy even beyond the Canadian border.

And so again with Azalea arborea, and viscosa ; pink varieties of the latter have been found, and in habit, size and shade of white it varies greatly, and is the best keeping and most fragrant Azalea, outside of the Indicas. I have no doubt but arborea varies too, and there is a pink one called A. optima flowering in July, so there is quite a good deal of material for the hybridist.

Who will go in for a strain of Rhodo-Azaleas for a future Fourth of July ?

Trenton, N. J. JAMES MACPHERSON.

AN UNRIVALED PUBLICATION.

GIUSEPPE SADA, VIA PRINCIPE UMBERTO 18, MILAN, ITALY. "Your very splendid 'THE NATIONAL NURSERYMAN' (June number) reach me now—my hearty thanks for it. Such an unrivaled publication is worthy of the largest favour among horticultural trade. Please write the cost for one year subscription and advertisement enclosed."

DO NOT WISH TO BE WITHOUT IT.

ALEXANDER & HAMMON, RIO BONITO NURSERIES, BIGGS, BUTTE CO., CAL. "We hand you herewith $1.00 for one year's subscription from February, 1893, to THE NATIONAL NURSERYMAN. We have been favored with copies of all the numbers of your journal, in which we have taken a great deal of interest and do not wish to be without it."



C. M. STARK.

The subject of this sketch is the senior member of the firm of Stark Brothers, Louisiana, Mo., proprietors of one of the most extensive nurseries in the country. These nurseries were started fifty-seven years ago by the late Judge Stark, and are now in the hands of the third generation. The original firm of Stark Brothers consisted of the late William Stark and Washington Stark ; later, from 1858 to 1865, of William Stark and the late Thornton G. Stark, and now of William Stark's sons. These three gentlemen are comparatively young men. They have established an extensive trade, and have departed largely from accepted methods of conducting a nursery business. They have exhibited considerable enterprise, and have made use of much printers' ink in advertising their business. A peculiarity of their system is the establishment of large orchards. They have a test orchard of over 14,000 trees near Denver, Colo. They claim a total of 13,000 acres in co-operative orchards in various states. The members of the firm are ardent advocates of whole-root trees. C. M. Stark attends most of the important meetings of nurserymen throughout the country, and is well known in the trade.

Among nurserymen and horticulturists at the World's Fair, are : W. F. Heikes, Huntsville, Ala. ; Anthony Waterer, Woking, Surrey, England ; T. V. Munson, Denison, Texas ; C. L. Watrous, Des Moines, Ia. ; A. Von Clauson-Kaas, Oschatz, Saxony ; Linus Woolverton, Grimsby, Ont.

BLOOMINGTON,

Comprising with Normal the Great Nursery Center of the West.

One thousand acres in nursery stock—Exceptional railroad facilities—Progress of the nursery business during nearly half a century—List of the firms and their plants—Phœnix nursery company—McLean county nurseries—The home nursury company.

Bloomington, McLean Co., Illinois, a city of 30,000 inhabitants, including Normal suburb, is near the center of the state of Illinois, at the intersection of five important railroads, the Chicago & Alton ; Illinois Central ; Cleveland, Cincinnati, Chicago & St. Louis ; Lake Erie & Western ; Jacksonville and Western divisions of the Chicago & Alton, and Kankakee division of the Illinois Central, 126 miles from Chicago, 156 miles from St. Louis, 206 miles from Dubuque, and 249 miles from Cairo.

The climate, soil and location have made this portion of Illinois renowned as a nursery center, the business having been carried on here for over forty years. Franklin K. Phœnix, in 1852, established a nursery in Bloomington in a small way, but in the following years the business was extended, until at one time Mr. Phœnix had the largest nursery in the United States. Others followed in the business. Most of the other firms have since gone out of the business, or the business has been continued by other parties. The principal nurserymen of Bloomington are the Phœnix Nursery Company, Dr. H. Schroeder, Fred. S. Phœnix, F. M. Emerson & Co , and F. A. Baller. At Normal the leading nurserymen are Augustine & Co., the Home Nursery Co., and W. A. Watson & Co.

A general line of nursery stock is grown there, including all the staple fruits and most of the ornamentals. Small fruits are also grown on a large scale there, and large shipments of fruit are made to Chicago, Minneapolis, St. Paul and other markets.

THE PHŒNIX NURSERY COMPANY.

The Phœnix Nursery Company of Bloomington, Ill., is one of the largest nurseries in the country, having nearly seven hundred acres in cultivation, and maintaining thirteen large greenhouses. The Bloomington Nursery was established in 1852 by Franklin K. Phœnix, and conducted by him on a very large scale until 1877, when he disposed of the business and left the state. The present proprietors and officers, who have since that time operated the nurseries, incorporated the business as the Phœnix Nursery Company. The officers of the company are : President, W. E. Rossney ; secretary, George J. Foster. The business has been successful and has been extended largely both in the fruit and ornamental departments, as well as the greenhouse department. The greenhouses, however, have been devoted more largely to the growing of roses and clematis in the past few years than any other varieties of greenhouse stock, but a general assortment of greenhouse stock is also grown.

The company has for many years imported largely from France, England, and Germany, of both fruit and ornamental tree seeds and seedlings for planting, but the past winter's importations of this class of stock was larger than usual. They also grow large quantities on the nurseries of both fruit and ornamental tree seedlings for transplanting. This added to the large importations the past winter made their planting probably the largest in the history of this old, well-known nursery establishment. The business of this company is both wholesale and retail, and is not confined to any one state or locality ; shipments are made to all parts of the United States, Canada, Mexico, France, Germany, Australia and New Zealand.

The packing grounds of this company are at Normal, one mile north of Bloomington, located at the crossing of the Chicago & Alton and Illinois Central railways. The packing grounds contain over twenty acres and are covered largely with packing houses, cold storage cellars, and other necessary buildings, and are but two blocks from the freight houses of the above railways. In addition to the above railways, the Lake Erie & Western, Cleveland, Cincinnati, Chicago & St. Louis or Big Four System, the Kankakee division of the Illinois Central and Jacksonville division of the Chicago & Alton also enter Bloomington, which gives unexcelled shipping facilities to all points. The greenhouses and city offices of the company are located on North Park street, Bloomington, on electric street car line, between Bloomington and Normal.

MCLEAN COUNTY NURSERIES.

W. A. Watson & Co., of the McLean County Nurseries, report a large increase in their business during the year ; ten per cent. in their wholesale, and twenty-five per cent. in their retail trade. They have greatly enlarged their packing yard. Their storage cellars have a capacity of twenty-five carloads or more. This firm has also a large acreage at Topeka, Kan., devoted largely to apple trees and apple seedlings, of which they make quite a specialty. They report one sale of 65,000 apple trees on one order. Their planting for last spring consisted in part of 300,000 apple root grafts, all on first-cut (whole root) ; 85,000 XX impt. pear seedlings ; 60,000 No. 1 plums, one-half Myrobolan and one-half Mariana ; 70,000 Mahaleb cherry, 20,000 XX quince. Besides this they have transplanted and set in nursery lines 500,000 Arbor Vitæ and 50,000 assorted evergreens, with the usual supply of shrubs, vines and cuttings. Their stock of Balsam Fir is unsurpassed—fully 50,000

fine salable plants of this choice evergreen ; they have planted at Topeka something over 50 bushels of French apple seed, and are planning for a large increase in their canvassing force during the coming season.

THE HOME NURSERY COMPANY.

One of the principal nursery firms of Normal is The Home Nursery Company, incorporated with a capital stock of $50,000. It was established in 1867 and incorporated in 1890. It has done business under several names since it was established. It received its present name in 1887. The management of the business is under the direct supervision of its officers : President, S. S. Porter ; vice-president and treasurer, J. N. Boyer ; secretary, E. A. Vencill ; superintendent of agents, G. A. Griggs. Special attention has always been given to the retail trade, confined mostly to Illinois and adjoining states. The company has always done more or less wholesaling, and is fast changing to that line of business. It does all its planting in the vicinity of Normal, and has at present 150 acres under cultivation, most of which is adjoining the city limits. It makes large plantings of hardy apples and crabs, plum, peach, Russian apricots and cherries, together with a good assortment of small fruits and ornamentals Its packing grounds are large and commodious and well equipped with everything necessary for packing stock in first-class shape. The business the past season far exceeded expectations, and the end of the shipping season found the company well sold out on stock of a salable age and size.

THE GENIUS OF THE GARDENER.

The landscape gardener, if his education has not been neglected, knows very well that a want of preparation will sadly prejudice and delay the operations of the short planting season this climate affords, he knows that hurry and exposure and delay will be resented by the sensitive vegetable life with which he has to count, as determinedly, if not as passionately as Colorado miners resent the repeal of the silver-purchase laws. He desires to get a pull on his planting season, just as much as the silver men desire to get a pull on the treasury.

Now is the time to prepare for autumn planting—especially where the operations are large. The ground should be cultivated and ready—perhaps in grass—the stations for all trees and groups should be pegged and determined and the holes dug, then with everything ready, planting is a pleasure. With everything unready and unthought, it is a hurried burden and confusion.

More than half of the parks and gardens are miserable failures. They are stupidly confused, either because they are without design at all, or because the design has proved to be incapable of economical execution. A park or garden without design imprinted on its surface, is like the heaps of hewn stone tumbled upon a building site—the material is there, but the masons have not studied the harmony of their relation to the whole, and they lie without shape or congruity or foundation. So with many a park and garden. A few meaningless walks and drives have been built until both patience and appropriations are expended, many hollows have been ploughed out, and bumps scraped up, grass-seed sown, and then anybody is at liberty to dot a few trees and shrubs around ; they may look as if the crows had dropped them, they may be ugly and heterogeneous, with a little of everything cheap enough everywhere, and meaningless masses nowhere, and the whole vapid scene is complete.

The imprint of the artistic mind guides the chisel and lends its charm to the block of stone, as the genius of the painter leaps from a canvas and enchains us, not because they emulate nature, or even faithfully portray her, but rather because they have the imitative genius to seize upon her most perfect expressions and present them to the senses in material foreign to nature's laboratory. It is the genius of imitation, the industry of application that enchains us

But how infinitely more subtle are the processes of nature herself, how vastly more varied her materials. The gardener who would group them must not only have a comprehensive knowledge of them, he must have a genius higher than that of either architect or painter if he would present them in a manner at once congruous, distinctive, and without prejudice to the environment.

Only one man has appeared among gardeners in my life time who possessed any such genius as this. This man was John Gibson the designer and superintendent of Battersea Park, and the introducer of the sub-tropical bedding and other features which his travels in the Himalaya had burnt into his mind. Mr. Harry Fitch of London once remarked to me that this man did more for modern gardening than any other of his century, and anyone who will think of the thousands who have never seen his work—never even heard of him and yet follow him—will be disposed to agree that such a man may be a power for good or evil design accordingly as his genius is imitated in its purity—but in creating a demand for material a mighty power indeed. Echeverias and coleus and all the host of Battersea sub-tropical plants have had a rare survival—and it may be that they will never be set aside.

Trenton, N. J. JAMES MACPHERSON.

The Niagara grape which was sold at fancy prices all through this part of the country a few years ago, is not all that its most sanguine friends anticipated, and according to the Albion *Republican*, some Orleans county farmers are taking up their Niagara vines.—*Dansville Express.*

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months ..... .50
Foreign Subscriptions 1.25
Six Months ..... .75

Advertising rates will be sent upon application.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., AUGUST, 1893.

BENEFITS OF CO-OPERATION.

The fruit growers of California have caught the idea of co-operation and are pressing on toward the formation of a great state association which shall be the outgrowth of the formation of several small associations. While the business is different from that of the nurserymen, the object is this case is the same. At a recent meeting of the State Horticultural Society of California, the president, Colonel Philo Hersey, and Edward F. Adams, manager of the Santa Clara County Fruit Exchange, discussed the subject of co-operation at considerable length. Mr. Adams defined the conditions and limitations of co-operation. "The question: How far may fruit growers co-operate? must be determined," said Mr. Adams, "by the limitations imposed in the first place by the general laws of trade. The best business sagacity would dictate that fruit growers in co-operation should not attempt to revolutionize the recognized laws of trade that the experience of mankind through long periods has evolved and formulated. A serious difficulty in the way of successful co-operation heretofore has been the iconoclastic tendency of the man who decides to change his own ways of doing business. He may attempt to overturn established systems and adopt radical methods, often at variance with fixed business principles whose observance is a *sine qua non* to the successful accomplishment of any legitimate enterprise. Confidence in the honesty and business sagacity of the managers and directors of the organization is a prime necessity, without which little can be done. The stockholders must be men broad enough to recognize business capacity in others and to exercise judgment in its selection, utilization and compensation. Capable management must be reasonably paid for, and in this regard the best is the cheapest."

Colonel Hersey called attention to the fact that while there are 1500 fruit growers in the Santa Clara Valley, an organization among half that number is all that is expected at present. He said: "A serious impediment to thorough co-operation has been found in the necessities of the growers, which lead them to hawk their fruit about and often to sell it at a very low price to speculators, thus injuring the market for the entire crop An organization to secure the best results should be so conducted as to command the confidence of capitalists; in which case money can always be obtained to help out in time of need, thus obviating the real or supposed necessity of selling at a sacrifice and demoralizing the market. Nearly all the specific industries of the state have gone or are now going through the trying period of organization and the attempted suppression of competition of each individual against the other. The wine industry, the raisin industry, and the wheat industry have had and are having their trials and tribulations. In all cases it has been found necessary to abandon the ancient methods of individuals struggling single-handed and alone against the combined forces in opposition. It is not the purpose of those who organize the fruit industry as proposed, to make any attempts to corner markets, to force exorbitant prices, or to do wrong or injustice to any industry or legitimate avocation. The chief ends sought or hoped for are a uniform system of preparation and handling fruit products, as well as of placing them upon the market in such manner as business prudence shall dictate to the end of steadying the markets and preventing disastrous gluts and famines."

Here is just the point that should be impressed upon the nurserymen. The fruit growers of the western state are contending, though in a different business, with the same evils that confront the grower and dealer in nursery stock It is believed that there is a desire upon the part of prominent nurserymen in certain sections to realize something of the same object which is so clearly outlined by the president of the California society, and there is little doubt that within the next twelve months definite action will be taken

THE OFFICIAL ORGAN.

IT has been suggested by several prominent nurserymen, members of the American Association of Nurserymen, that the cost of publishing the proceedings of the annual meeting of the association might be materially lessened by declaring THE NATIONAL NURSERYMAN the official organ of the association, and having a verbatim report of the annual meeting, including the papers read, the list of members, telegraphic code, etc., published in a special convention number of the journal.

The trade now has an established organ of its own. It is at the service of the nurserymen, in whose interest it is published. The suggestion seems appropriate for the reason that THE NATIONAL NURSERYMAN published in the July number a complete report of the proceedings

of the annual meeting, together with several of the papers, and could easily have published the entire matter by enlarging the journal for that issue.

THE problem before the fruit growers of the country is how to sell fruit rather than how to produce it. So it is with the nurseryman how to dispose of stock to the best advantage, rather than how to grow it.

REPORTS from the Pacific coast indicate that many large orchards have been planted in the favorable sections there and there is promise of a rapidly increasing demand for nursery stock in that part of the country. The vast extent of territory and the superior climatic conditions cause planting there by the wholesale while it is going on at retail in other sections.

KNOTS ON MARIANA ROOTS.

To the Editor of THE NATIONAL NURSERYMAN :

I saw the article of Thomas Meehan on the Mariana as a stock some time since, and I am now reading what Mr. Heikes says in the matter.

Mr. Heikes is writing of our very troublesome pest, anguillula, that is so prevalent in all our poor sandy soils in this extreme southern section. It is natural in most soils here, and it uses any succulent-rooted plant to multiply in ; especially is it propagated a million fold in our southern cow-pea, and land once planted in cow-peas is unfitted for figs, peaches, and many other soft-rooted plants.

We have used the Mariana plum as a stock for the peach, as the anguillula does not effect plum roots so far as I have seen ; but trees that I have had sent me from two different sections, have come to me with this knot, and I send you a specimen of it by mail to-day. If it is not "black knot," what is it ? I also send a specimen of a peach root that was sent me from Delaware six years since, and you will see it has a genuine case of "root knot," and I know it caught it here, but that black knot came with the plum trees I have hoped the Mariana plum was not to blame for it—that it had caught the disease from other trees in the section where grown.

Orlando, Fla. JAMES MOTT.

Professor George F. Atkinson, cryptogamic botanist at the Cornell experiment station at Ithaca, N. Y., to whom the matter was referred, says : "Several years ago while connected with the Alabama Polytechnic Institute at Auburn, Ala., I made an extended study of the root galls which are caused by the worm commonly termed in Florida "anguillula." It is *heterodera radicicola,* very widely distributed over the world. It occurs in all the southern states, and in greenhouses, or forcing houses at the north. Your correspondent can obtain the results of this study by writing to Auburn, Ala , (Exp. Station) for Bulletin No. 9. The galls on the Mariana plum are neither "black knot" nor the nematode galls. But they belong to trouble which is quite wide-spread in Europe, and is known to occur throughout the United States, though this knowledge is perhaps not very general. I have found it in Alabama on the peach and raspberry. It occurs in New York on the raspberry and rose ; in Iowa on pear trees, in California on peach, apricot, and other trees. What its cause is, is at present a mystery, but it would be well, perhaps, to treat it as an enemy that can be propagated by germs, though its germ origin has never been demonstrated. In Europe it is believed to result from some physical injury inflicted upon the root at time of transplanting, or during cultivation. It is there called 'Wurzel Kropf.'"

FOR THE HORTICULTURAL CONGRESS.

Following is the programme prepared for the nurserymen's section of the horticultural congress which will convene at the World's Columbian Exposition on August 16th :

The European Nursery Trade—Victor Le Moine, H. Waterer, Philadelphia.

History of the Nursery Business in America—S. B. Parsons, Flushing, N. Y. Discussion by Robert Manning, Boston ; Thomas Meehan, Philadelphia ; D. W. Beadle, Toronto ; Geo. W. Campbell, Delaware, Ohio.

Status of the Nursery Trade in the South—Parker Earle, Ocean Springs, Miss.; E. H. Hart, Federal Point, Fla.

Status in the Mississippi Valley—S. M. Emery, Lake City, Minn.

Status on the Pacific Slope—W. R. Williamson, Sacramento ; Seth Llewellyn, Milwaukee, Ore.

Japanese Nurseries : Dwarfing of Plants and Miniature Gardening—Mr. Izawra.

Inter-State Restrictions : Laws to Control Insects and Diseases—Edwin Willits, Ass't Secretary of Agriculture, Washington, D. C. ; John Rock, San Jose, Cal. ; W. C. Barry, Rochester.

Forecast of Better Things—T. V. Munson, Denison, Texas ; Luther Burbank, Santa Rosa, Cal.

A correspondent writes from Tryon, N. C. : "The peach crop this year, notwithstanding the late frosts, has been large, and the shipping season, which opened about the middle of June, is turning out quite satisfactory in financial results. The early fruit was very handsome in appearance, but the hot and rainy weather caused it to rot about as fast as it ripened, so that shipping was not satisfactory. The later fruit is very fine, large in size and of a very excellent flavor ; it stands shipment well, and a friend of mine who is shipping seventy-five to eighty crates a day to Washington has received as high as $3 a crate for them. The rates will, of course, not continue, or everybody would be in the peach business."

PEACH PLANTATIONS IN THE SOUTH.

J. H. Hale, of South Glastonbury, Conn , writing from Fort Valley, Ga., to *The Florist's Exchange*, says: "Round about Fort Valley (which, by the way, is 30 miles southwest of Macon and 20 miles north from Andersonville) are some thirty individuals or stock companies, owning each a peach orchard from 100 to 800 acres in extent, some 50,000 in all, besides many small blocks of from 100 to 3,000 trees on almost every plantation for miles around. The early varieties, like Alexander and Waterloo, ripen here the last of May; following these come Yellow St. John, Rivers, Tillotson, Mt. Rose and Early Crawford for the June crop, while in early June come such fine late sorts as Elberta, Thurber, Belle of Georgia, ending the season about the 20th of the month, as growers in this section aim to get in their fruits and be out of the markets before the favored peach sections of the Central North begin to show up. A large party of nursery and fruit men from Ohio and the Central West were down here looking over the fruit and nursery interests of this section. Of well-known men in the party were Frank Withoff, secretary of the Chain of Nurseries Co.; N. H Albaugh, president of Albaugh Nursery Co., of Tadmor; N. H. Ohmer, of Dayton, well known as originator of the Gregg raspberry, and for some years president of Ohio Horticultural Society; Brodenstein & Arrick, of the Colraine Grape Co., stockholders in the various Ohio orchard companies located hereabout. This is a wonderful country for propagating roses in the open ground, and D. F. Reese, of Springfield, Ohio, has been prospecting for a hundred-acre tract of land, all of which is to be used for rose propagation. Budding can be carried on through three or four months of summer, and buds put in as late as the middle of August often can be made to grow two feet or more before winter, while buds inserted earlier often make bushes almost too large except for fancy retail trade. Berckmans & Son, of Augusta, have long had the reputation of producing some of the strongest roses grown in America, and as the conditions here are still more favorable, I doubt not that in a few years Mr. Reese will build a rose nursery here that will astonish the North with its products, both in quality and price. Land is cheap, stocks grow freely, and labor is so faithful and cheap. Negro boys at 40 and 50 cents per day learn to bud readily, and soon do good work. We are using many of them in the peach and plum nursery with great success. We began budding peaches the last of May, and kept it up through June. Stocks have now been cut back and the buds are coming on rapidly, and by constantly cultivating the ground every week till October, can grow June buds here three to four feet in one season. I shall keep up summer budding a week or two yet, then bud Japan plums on Mariana stocks, where they grow readily as summer buds, and later put in a lot of both plum and peach as dormant buds. Peach and plum also grow equally well here from winter growth, so that for open field culture propagation can go on here for about seven months of the year.

"Ten years ago Sam. Rumph's Willow Lake Nursery was the only one in the whole Southwestern Georgia section. His success in his peach orchard venture started a few of his neighbors at orcharding, which in turn started two or three small peach nurseries. Then our coming here and planting out a great peach orchard of over 100,000 trees attracted the attention of other northern men, till within five miles of us now are several great companies: Albaugh Company have 80,000 trees; Troy Fruit Company, 30,000 trees; Ohio Fruit Land Company, 40,000 trees; Fort Valley Company, 10,000; Arrick Grey Company, 10,000; Melon City Company, 30,000; Oak Ridge Company, with 40,000, nearly all to plant many more the coming winter. These companies have from five to ten stockholders each, and in nearly every company is one or more nurserymen (with their usual "get there" to have a finger in most every pie of a horticultural flavor) to help out on operating expenses till the orchard should be of suitable age to give returns. We at first began the propagation of Mariana plum stocks and peach trees on an extended scale, and the other companies are following in the same line, and so it has come about that several great nurseries have sprung up here all at once, and to-day within two miles of where I write can be seen growing millions upon millions of young peach and plum trees, in straight nursery rows that, to set, would do the heart of a northern man good.

"Besides these millions of trees, there are many thousands of grapes, apricots and pears. The Hoyts, of New Canaan, Conn., are here propagating 50,000 of their great Green Mountain grape. The Harris apricot, so highly prized in Western New York, is being propagated in large blocks. Altogether it would appear that a great new nursery center was about springing up here. While at Rumph's a few days ago he called my attention to a block of 1,300 Le Conte pear in orchard, just loaded down with the new ripening fruit; he pointed out the great difference in the loads of fruit different trees were carrying. All through the South the Le Conte has nearly always been grown from cuttings, but Rumph propagated a lot on French stocks, and then when this orchard was planted mixed up a hundred of them with the trees grown from cuttings and planted in one corner of the orchard. Away off, on the other side, one whole row was planted with trees on the French roots, and now the fruiting results are so marked in favor of these stocks as to attract great attention to the subject. Every tree where they are mixed up can

be picked out at once by its extra load of fruit, while the single row has its branches bending to the ground with fruit. The rows adjoining, grown from cuttings, while well filled with fruit have not enough to bend a twig. The 1,300 trees, now eight years planted, I judge, will give 1,000 barrels of fruit; but if all were on French stocks, instead of own roots, the crop would have been not less than 2,000 barrels. Complaint has often been made as to the non-bearing of Le Conte, especially till the trees get old. May not have Mr. Rumph's experiment disclosed the cause of the trouble? Let us hope so."

THE CONDITION OF CROPS.

The government crop report, on the condition of fruit, for July, is as follows:

Apples.—The prospective crop of apples, commercially considered, as indicated by returns of our correspondents for July, will be light, and in many sections a complete failure. The high returns in June from districts then in bloom have been materially lowered for July, the set has been poor, and the drop, still continuing, severe. Thus in Maine and New York the percentages are lowered 22 and 19 points, respectively. These states are by far the most important of the eastern apple district, and failure there makes the sustained percentages of New Hampshire, Rhode Island and Connecticut of little significance as regards surplus production, though it means much to successful growers in the latter states. Large reductions are also shown in Vermont, Massachusetts and Pennsylvania. In New Jersey, Delaware and Maryland a fair to good crop is expected. The percentage in the latter state, however, has been reduced 16 points by the dropping of immature fruit, and is liable to still further reduction from the same cause. Virginia has sustained her percentage and will probably have half a crop. In the Ohio Valley and the Missouri fruit belt things have gone from bad to worse. The frequency of the word "failure" in the notes of the correspondents throughout these sections ominously emphasizes the exceedingly low condition, as shown by the percentages. Michigan has declined 20 points since June report. The high condition of apples in the Pacific coast region still continues, and a good crop is confidently expected. The fruit is dropping some in Oregon, where the decline since June, though slight, has been greater than in Washington and California.

Peaches.—A large crop of this fruit is indicated by the returns of the present month. The percentages of June are well sustained in the states of surplus production, excepting in Ohio and Georgia. In the former state the condition has been low from the start, and since last report fruit has dropped badly. In localities where fruit is still on the trees the early varieties are rotting more and more as they approach maturity. The same causes have worked the decline in Georgia. In the states of New Jersey, Delaware and Maryland the prospect has been rarely, if ever, so promising. Returns from the peninsular district of Delaware and Maryland point to a crop larger than any since 1875. The critical period has been passed in New Jersey, and yet the returns from that state make an average of 101, one point above the standard. From Michigan the returns are not quite as encouraging, but a very fair crop seems probable. California returns average high. A good crop is assured, and the fruit being of excellent quality, it is thought prices will rule high, and the net profit to the orchardist be satisfactory.

Grapes.—The condition of grapes is generally high throughout the country, and the prospects of the crop are excellent. Rot is reported as appearing in some sections, though not to an alarming extent, and rosebugs are doing damage in some counties in the eastern and middle states.

Among Growers and Dealers.

The Rhododendron exhibit of Fred. W. Kelsey at the World's Fair is one of the chief features of the floricultural exhibit.

E. H. Ricker, of the E. H. Ricker Company at Elgin, Ill., proprietor of the Elgin Nurseries, made an assignment June 24th to R. M. Ireland.

E. T. Dickinson, the great exporter of Chatenay, France, has been in this country a month booking orders for seedlings. He will return to France in August or September.

The Morris Nursery Company of San Bernadino and Rialto, Cal., has been incorporated with a capital stock of $65,000. The directors are O. M. Morris, John M. Morris. Sr., John M. Morris, Jr., and K. A. Wilsey.

John Palmer, of the firm of John Palmer & Son, Annan, Scotland, well-known growers of ornamentals and the Industry gooseberry has been making his annual visit to this country. He was in Rochester ten days on his way home, during the latter part of last month. He reports trade very dull, especially in the West. He was much pleased with the World's Fair.

The distribution of raspberry plants by President M. A. Thayer of the Wisconsin Horticultural Society, on Arbor Day, as described in the July number, has called attention to the distribution on Arbor Day by Stark Bros. of Louisiana. Mo., of nearly 1,200 packages containing 35,000 fruit trees and over 3,000 rose bushes. This Arbor Day offer was for Pike county, Ill., and Pike county, Mo.; however, children from adjoining counties were not barred. This firm sends every year large quanties of trees and plants gratuitously to charitable institutions, orphan asylums, churches, schools, homes for old soldiers, private colleges, etc. Such distributions are indeed an observance of Arbor Day.

The business of the firm of May Brothers was terminated on July 19th, when the Union Bank secured a judgment against the firm for $4,986.87 and executions were levied by the sheriff. It was supposed the firm was on a sound basis and that it had a capital stock of $50,000. It was claimed that the firm had made sales last spring amounting to $20,000. It was generally believed that the firm of May Brothers was composed Lewis L. May and Frederick N. May, but Lewis L. May, who is in St. Paul, Minn., says he has never been a member of such firm, and has never seen the judgment named nor has a summons been served upon him. He says: "I have been doing business under the name of L. L. May & Co., at St. Paul, Minn., but without associate, and am abundantly solvent and reliable. Anyone can ascertain these facts by referring to the Bank of Minnesota, or other banks of St. Paul."

From Various Points.

Judge Miller, of Missouri, says that the fruit crop generally is a failure. He thinks California will reap a rich harvest this year.

It is reported that the famous Le Conte pear, so extensively propagated in the South because of its supposed freedom from blight, is blighting badly this year.

S. D. Willard recommends the following new fruits: Sutton's Beauty apple, Martha crab, Longfield apple, Horton Rivers peach, Haines Surprise peach, Field plum and Harris' apricot.

Shipments of nursery trees from Pomona, California, have reached the following figures for the season, says the *Progress*: Oranges, 116,357; lemons, 4,376; prunes, 16,204; peach, 10,018; apricots, 5,960; plums, 633; apples, 232; olives, 615,642. Total, 769,422.

Some large peach orchards are found in Georgia, even outside of the well known "peach belt" about Fort Valley. Mrs. J. D. Cunningham, of Atlanta, is reported to have a 200-acre peach orchard near Marietta, among the Kennesaw mountains, comprising 30,000 trees from which she expects a yield this year of 70,000 bushels of fruit.

At the great rose shows in England last month, much interest was taken by all the leading growers. Of the National Rose Society's exhibits at the Crystal Palace, *The Gardener's Magazine* says: "For the challenge class, open only to nurserymen, stands of seventy-two distinct single trusses were staged by four competitors, Messrs. Harkness & Sons, The Grange Nurseries, Bedale, York, being easily first with a superb collection, almost all the blooms being perfect examples, and the finest of these, if we may venture to select, were Dr. Andry, Gustave Piganeau, Ulrich Brunner, Innocente Pirola, Margaret Dickson, Victor Hugo, Etoile de Lyon, Boule d'Or, Horace Vernet, a lovely bloom of beautiful color and form, which won the silver medal as the best H. P. shown by a nurseryman, Mons. E. Y. Teas, Earl of Dufferin, Dupuy Jamain, Victor Verdier, Catharine Mermet and Ernest Metz. Mr. Ben Cant won the second prize, showing fine flowers of Pride of Reigate, Paul Neyron, Ernest Metz, Comte Raimbaud, Ethel Brownlow, Madame Cusin, Madame Verdier, Madame Hoste, and the Bride, the latter bloom gaining for Mr. B Cant the silver medal offered for the best tea rose shown by a nurseryman. Mr. Frank Cant third, his best blooms being Ethel Brownslow, John Stewart Mill and Auguste Rigotard. In the class for forty-eight trebles, Messrs. Harkness & Sons were again first, showing handsome and large blooms against which the southern growers this year could not stand."

Pitcher & Manda have sent out as usual their comprehensive catalogue of bulbs and seeds for fall planting.

Among the Exchanges.

A CASE OF SUBSTITUTION.—Some two years ago, the Park Nursery Company of Pasadena sold to J. C. Sherer some 250 peach trees, said to be of the yellow-fleshed varieties. After the same had been planted in orchard form and come into bearing they turned out to be of the white, free stone varieties, the fruit of which is not in general demand, and consequently has no commercial value. Mr. Sherer sued the nursery company for damage, including the loss of two years' time, cost of cultivation, interest of capital invested and first cost of the trees, and got judgment for $350. In rendering a decision the judge ruled: "That the sale of nursery stock, billed as of any particular variety, is a practical guarantee that the stock is to be as represented; and further, that the measure of damages now, two years after the setting of the orchard, is the difference in value of the trees now on the land and that of trees of the varieties the nursery company represented the stock sold to the plaintiff to be." In other words, the somewhat hackneyed guarantee that plants "are true to name" must be lived up to. The decision generally meets with favor alike among nurserymen, dealers and planters.—*The Florist's Exchange.*

RECENT PUBLICATIONS.

The report of the commissioners of Lincoln Park, Chicago, from December 1, 1886, to January 1, 1893, is a handsomely prepared volume descriptive of the famous park of the western metropolis. The book, like the park itself, is a credit to the superintendent, J. A. Pettigrew. It contains an interesting history of the park and a resume of the work of the commission. It is handsomely illustrated with photo-engravings of prominent features of the park. Chicago: GEORGE E. MARSHALL & CO.

The fourth annual report of the Missouri Botanical Garden of St. Louis is in line with the previous similar excellent productions of this institution. The report prepared under the supervision of the director, Prof. William Trelease, shows that with all the expenses paid there was on January 1st a balance on hand of $23,561.59. There are 11,455 books and pamphlets in the library and 203,000 sheets of specimens in the herbarium. The stock account aggregates $1,467,731.53. There have been received to increase the number of species in cultivation 1,475 packets of seeds and 100 living plants. About 3,025 packets of seeds have been distributed by the garden to other gardens. The average number of gardeners employed has been 42. The garden has the most complete and valuable American collection of pre-Linnaean botanical books. It was presented by Dr. Sturtevant of St. Louis. Features of the report are a list of plants collected in the Bahamas by Albert S. Hitchcock and an article on "Further Studies of Yuccas and Their Pollination," by Professor William Trelease. Both are of great value and interest to the botanist. The article on Yuccas is profusely illustrated by handsome photo-engravings.

"The Garden Oracle" is one of the standard English publications for horticulturists and florists. It is in the thirty-fifth year of publication, and each year it has retained all its old features which have proved of great value and has added new ones. It is compiled by the editor of *The Gardeners' Magazine*, one of the foremost floral and horticultural periodicals of England, and this fact is sufficient to guarantee its excellence. The present issue contains a complete code of garden work which may be considered a safe rule of procedure in all cases; a list of new plants of 1892 and another of new fruits of 1892 with illustrations; appropriate selections of plants and flowers; lists of horticultural and botanical societies and the public parks in the United Kingdom, botanical gardens at home and abroad, gardening inventions, garden foes, garden recipes and much miscellaneous information. London: The Gardeners' Magazine office, 4 Ave. Maria Lane, Paternoster Row, E. C.

Ellwanger & Barry have issued a very handsome catalogue of strawberries, Holland bulbs and specialties for the summer and autumn trade.



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The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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DEPARTMENT OF AGRICULTURE RECEIVED U.S. DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., SEPTEMBER, 1893. NO. 8.

THE HORTICULTURAL CONGRESS.

NURSERYMEN, SEEDSMEN, POMOLOGISTS AND FLORISTS MEET AT THE WORLD'S COLUMBIAN EXPOSITION.

The Horticultural Congress met at the World's Fair on August 16th, 17th and 18th. W. Atlee Burpee, of Philadelphia, was chairman of the seedsmen's section. J. Peter-Bjerhaard, of Copenhagen, described seed growing in Denmark. C. H. Allen, of Floral Park, N. Y., read a thoughtful paper on selection and its relation to seed growing. E. V. Hallock, of Queens, N. Y., impressed upon his hearers the necessity of a thorough knowledge in the seed trade of the principles of horticulture. The closing paper of the session was read by C. C. Morse, of Santa Clara, Cal., on American seed growing. Many eminent horticulturists took part in the discussion of the papers.

At the meeting of nurserymen Henry Izawa, of Japan, read a paper descriptive of the dwarfing of plants and miniature gardening in his native country. Papers were read by Edward Willitts, of the Department of Agriculture, Washington, on the necessity for interstate laws to control the treatment of insects and diseases which endanger horticulture, and by Robert Williamson, of Sacramento, on the nursery trade on the Pacific coast.

In connection with the pomological section a meeting of the American Pomological Association was held, at which it was decided to hold the next meeting of the organization in San Francisco in the winter of 1894-95. Among the papers presented was one on "Location and Environment as Effecting the Evolution of Fruits," by G. B. Brackett, of Iowa, and one on "Catalogue and Nomenclature," by T. T. Lyon, of South Haven, Mich.

In the division on floriculture Robert Craig, of Philadelphia, spoke on the present, and E. G. Hill, of Richmond, Ind., on the future of floriculture.

At the general session addresses were made and papers were read by P. J. Berckmans, C. C. Bonney, J. C. Vaughn, Professor Trelease, Superintendent William McMillan, Professor L. Wittmack, Charles W. Garfield.

Following is Mr. Williamson's paper :

NURSERY BUSINESS ON THE PACIFIC COAST.

"The Pacific states are peopled by a cosmopolitan population hailing from all parts of the world and bringing with them their preconceived ideas of everything, horticulture among others. The coast, and especially California is truly a country of variety ; variety of climate, variety of soil, variety of products, variety of people. As soon as it was discovered that fruit could be successfully grown in California this great variety of people, hailing from all parts of the world at once sent to their former homes to get what they believed to be the best fruits of their country ; consequently, in a very short time there was a greater variety of fruits on the Pacific coast, especially California, than any other part of the world. Fruit growing at once became an experiment, with thousands of experimenters, and time proved that hundreds of varieties which were very valuable in the country from which they came, were worthless here, and had to be discarded. Men for a while were completely at sea to know what to reject and what to hold to. In the midst of this chaos hundreds of men plunged into the nursery business, a large portion of them entirely ignorant of the business, mere unscrupulous adventurers. Others who understood their business at home, made grave mistakes because they could not get the same results here that they got at home and because the knowledge they had in their own country availed but little here. Hundreds of men have come to this country who were practical nurserymen, but owing to our peculiar climate and soil, as the common phrase has it, 'they had to learn their trade over again.' This combination of circumstances brought nurserymen and the business into disrepute, and for a time nurserymen were looked upon, especially in California, as little better than highwaymen.

"Some of these charges were just, but in the main they were unjust, but the disastrous results were due mainly to ignorance of surrounding conditions. The great variety of climate and soil, especially in California has caused many an innocent nurseryman to suffer ; for instance, he might have a fruit that did exceedingly well in his own community, he knew it to be a first-class fruit and would sell the tree to go to another locality, (perhaps not fifty miles distant,) where the climate and soil, and perhaps both were so different, that the fruit would be practically worthless, and he would be censured. But in time both the nurserymen and people learned all these facts, and then things began to assume a different phase. A better and more intelligent class of men entered the nursery business and gradually these obstacles were overcome and confidence returned in the much-abused nurserymen.

"The horticultural interests of the coast, and especially of California, have made phenomenal progress.

Millions and millions of trees have been planted annually and still the planting goes on, and there is less fruit going to waste than there was twenty years ago, and I think to-day we have as honorable, and intelligent and persevering nurserymen on the Pacific coast as can be found in the world, and some have large nurseries. But like everything else it is being overdone. There are too many nurseries on the coast and while we have many natural advantages, and our trees make a phenomenal growth and we have a long planting season and many other advantages over our Eastern brethren, yet we have disadvantages, perhaps as many as they have. The California nurseryman deals almost exclusively in staple stock. Orchards on this coast are planted on a large scale and for commercial purposes. We have little ornamentation and absolutely no fancy prices, for none are fancy varieties Eastern nurserymen can make large profits on new things which will overcome losses that they may sustain on staple stock. The competition is sharp and the planter is well aware of the fact that he buys his stock at the very lowest possible price, often leaving the nurseryman a very small, if any margin. Again, our expenses are greater than in almost any other country; labor is high, and everything that we use is much higher than in the East, and we are troubled with very many injurious insects and diseases that were unknown ten and twenty years ago. For instance, the root knot, especially in the peach, almond, apricot, and sometimes on the cherry root, destroys hundreds of thousands of trees every year, and it is growing worse and worse, and we have been unable to find a remedy for it, and in some localities where the nursery business was a grand success, the nurserymen have in some instances abandoned the business on account of the root knot. I know of one district where ten years ago it was unknown, and now the nurserymen do not pretend to raise anything on peach or almond roots any more. I saw one lot of trees dug last winter where 75 per cent. had to be rejected on account of the root knot, and so far we have been unable to determine the cause or find a remedy. Again, the large profits made by Eastern nurserymen on floriculture we cannot make from the simple fact that our climate is so mild, and things grow in the open air so easily and so readily that people do not have to depend on nurserymen for their shrubbery and flowering plants. One neighbor will give slips and plants to another, and you will often see in one housewife's garden such a grand floral display that a casual observer would think it was a floral show, and perhaps she has grown all the plants in the open air from seeds and slips of her own growing. This cuts off a large revenue from the nurserymen on this coast. We have got as practical florists here as can be found anywhere, but the business does not pay as it does in the East, hence it can be readily seen that our disadvantages will offset all the natural advantages we have, and what the future is to be, I know not, for nurseries large and small have accumulated to that degree that it seems to me there must be in the near future a complete glut in the market. But the old and well established and reliable nurseries, having the confidence of the public, will of course be the last to succumb. Prices have been constantly declining until at present we are forced to sell at a very little above the actual cost of the product and there still seems to be a downward tendency.

"The orchard outlook in the state is good; we have less injurious insects preying on our trees and fruit now than we had five or six years ago. Parasites have been found for several of our most destructive insects. We have had a God-send in some localities this year in the shape of a lady-bird which literally destroys the woolly aphis on our trees. In our warm climate this has been a great pest, though not as destructive to the trees as many insects we have had. The codlin moth and what we term the 'peach moth,' is now our worst enemy and so far as my observation goes, the codlin moth is not so bad this year as it was last, and I am in hopes there is some parasite preying on it.

"Our people are constantly learning how to plant, and what to plant and also what is best adapted to climate and soil; consequently horticulture is conducted on a far more intelligent basis now than in former years. Hundreds of thousands of acres have been planted to orchards in this country that never should have been planted and growers who farm such land must necessarily lose much of its value, and this raises the hue and cry of over-production; but it is my judgment that the day never will come when thorough, intelligent orcharding will not pay on the Pacific coast, especially in California. The day is not far distant, in my judgment when the products of the tree and vine will be our staple. I think the day is near at hand when more money will be realized in this state from the product of the tree and vine, than from wheat or any other branch of agriculture. Of late public attention has been turned largely to the olive and fig which I think in time, when properly handled will be an immense source of revenue to the state. There appeared to be last year an overproduction of raisins, and prices ruled low. Many growers suffered heavy loss, but that has been the case in all branches of agriculture since the soil has been tilled. This year wheat is selling at a loss, other years there has been large money in it, and so it will ever be. I do not think the world can produce a better raisin than is grown here, I do not think the business is overdone as many people claim.

"The almond and walnut industry is assuming gigantic proportions, and we can supply the world with these nuts. The orange industry is making rapid strides;

acreage is increasing very fast and while the prices have ruled low this year, yet the crop has found a market at fairly remunerative prices ; and so it is with all lines of fruit ; they pay better than any other branch of agriculture.

"The great diversity in climate and soil on this coast, makes it possible for us to raise all kinds of fruit, from the tropics to the temperate zones. While all cannot be grown in one locality, there are localities within the limits of California where the different fruits of the world may be successfully grown and there is still room for profitable investment on this coast."

MR. HALE AND THE GEORGIA ORCHARDS.

Editor of THE NATIONAL NURSERYMAN :

In the August number of the NATIONAL NURSERYMAN, I notice that our good Brother Hale in his article on Fort Valley, Ga., and the peach orchards, either through faulty memory or by some typographical error, has made some rather important mistakes. By his article the reader would be led to believe that Brother Hale was the pioneer northern horticulturist at Fort Valley Now the facts are that the Ohio fruit men (like the Ohio man, always to the front) were at Fort Valley and invested and planted largely before Brother Hale bought an acre or set a tree there. Mr. Hale was probably attracted there by what the Ohio men had done and not the exact opposite, as his article seems to indicate.

The Albaugh Georgia Fruit Company was incorporated in 1890, and it set 75,000 peach trees that year. The Troy Company was formed the same time and planted 15,000 peaches. The Ohio Fruit Land Company was formed in January, 1891, and has planted 111,000 peaches, 10,000 Kiefer pears and several thousand plums. Since that time there have been incorporated : The Arrick Gray Company, with 30,000 peaches and 5,000 grapes ; The Fort Valley Land and Orchard Company, 20,000 peaches ; the Oak Ridge Company, with 30,000 peaches ; the Tivoll Fruit Company, planting this fall 80,000 peaches and 10,000 grapes, and the Standard Fruit Company planting 30,000 peaches ; so that these Ohio men who are all joined together in the different companies, own now in Houston county 7,300 acres of the choicest land, upon which are already planted 300,000 peaches (60,000 of which had a crop the present season) and 11,000 Kiefer pears, 5,000 grape vines and 1,000 Burbank plums, and the land is being prepared for 110,000 more peaches, making, when these are planted, a little over 400,000 peaches, beside the plums, pears and grapes. They also have a nursery of 250,000 young peach trees and 2,000,000 Mariana cuttings. The peach orchards owned by these gentlemen are not only the largest in the world but already three times, and in three months more will be four times as large as Mr. Hale's orchards.

The writer has great respect for Mr. Hale, both as regards his horticulture knowledge and general intelligence, and is much pleased with his fine orchards at Fort Valley, and feels sure that he will gladly accept the facts here given, because he knows they are exact and true. The Albaugh Georgia and Ohio Fruit Land Company, through F. G. Withoft & Sons, made a very fine display of fruits at the World's Fair during July, from Georgia and the orchards there, it being the only horticultural display made from the "Empire" state of the South at the Fair.

The leading Ohio men in these Georgia companies are : Hon. N. H. Albaugh of Tadmor, O. ; F. G. Withoft of Dayton, O. ; Hon. W. T. Cope of Columbus, O., present state treasurer ; Hon. David Lanning, ex-chief clerk of Ohio House of Representatives, Columbus, O. ; Z. K. Jewett of Sparta, Wis., vice-president American Association of Nurserymen ; H. Ohmer, ex-president of the Ohio State Horticultural Society ; B. Trimpe, Sidney, O. ; N. D. Bates, M. Beecher, W. Kramer, S. D. Trone, William Hoskett, A D. Wilt, John Barlow and other prominent capitalists of Dayton, O., and a half dozen more from Columbus, O., and Cleveland, with Messrs. Arrick and Bridenstein of Bridgeport, O. These orchards above described, with that of Mr. Hale's, all near Fort Valley, Ga., are by far the largest peach orchards in the world; all in perfect health, finely cultivated, and worth traveling a thousand miles to see, by anyone interested in horticulture.

Dayton, O. F. G. WITHOFT.

PROSPER JULIUS BERCKMANS.

The frontispiece of this issue of the NATIONAL NURSERYMAN presents an excellent likeness of Prosper Julius Berckmans, well known in every branch of horticulture. He is the honored president of the American Pomological Society, the annual meeting of which was held last month in Chicago. He is the proprietor of the Fruitland Nurseries near Atlanta, Ga. These nurseries cover an area of 400 acres, 300 of which are under cultivation for nursery stock. There are 40 acres in bearing orchards and vineyards. There is also an acre under glass. Mr. Berckmans has 250,000 rose plants in one field and his stock comprises 1200 varieties.

Mr. Berckmans is a native of Belgium. He went to Georgia in 1850. He is an educated botanist and he has made the study of flowers and fruits his dominant pursuit for over forty years. He writes often for horticultural journals. Associated with him are his sons, L. A. Berckmans, R. C. Berckmans and P. J. A. Berckmans, all of whom have a life long familiarity with the business.

JOHN CRAIG.

The subject of this sketch, well known as the horticulturist of the Central Experimental Farm, at Ottawa, Ont., is one of the foremost horticulturists of the country. He belongs to that class of young men who have risen rapidly to prominent positions by reason of close application to study and practice in a chosen profession. Mr. Craig is a native of the Province of Quebec. He was born at Lakefield, Argenteuil county, in 1864. His parents had charge of the experimental farm belonging to the late Charles Gibb, at Abbotsford, and John Craig was private secretary and assistant to Mr. Gibb. He graduated from the high school in Montreal and the Iowa Agricultural College, in the class of 1887. He was thus under the instruction of Professor J. L. Budd, who visited Russia with Mr. Gibb, to gather hardy fruits for testing in North America. During his college work Mr. Craig employed his summer and winter vacation time in practical nursery and greenhouse work and his last year, as Professor Budd's assistant, in hybridizing, propagating and testing varieties.



JOHN CRAIG.

Upon the organization of the Iowa experiment station, Mr. Craig was made assistant director and was given special charge of of the Department of Horticulture. He was sent on a botanical expedition, pursuing his research in Dakota, Montana, Washington, Oregon, Utah and Colorado. In January, 1890, he was appointed horticulturist of the Central Experimental Farm for the Dominion of Canada.

Mr. Craig is a member of the principal horticultural and pomological societies of the United States and Canada, of the American Forestry Association, and of the American Association for the Advancement of Science.

DELAWARE PEACH ORCHARDS.

E. N. Vallandigham, writing from Seaford, Del., says: "When the Delaware peach, just now about making its appearance in many cities, towns and villages, once fairly takes possession of the markets, all other fruits—domestic and foreign—acknowledge its supremacy, and fruit is always cheap in what is called down here 'a good peach year.' This little town, on the river Nanticoke and the Delaware railroad, is as nearly as may be the center of the world's chief peach growing region. When one speaks of the Delaware peach, one means, of course, the peach that grows on the Delaware peninsula, which includes the state of Delaware and the eastern shores of Maryland and Virginia.

"The peach region is mainly confined to those counties of Delaware and Maryland lying directly between Delaware and Chesapeake bays; specifically, Kent and Sussex counties in Delaware, and Kent, Queen Anne's Caroline, Talbot, and Dorchester on the eastern shore of Maryland. Peaches grow, however, in every county of the peninsula, though the great bulk of so-called Delaware peaches comes from the group of counties first named. Seaford may be esteemed the peach center, though Melford and Bridgeville, both in Delaware, also contend for that honor. Ten years ago the peach center was some miles farther north, and it has traveled southward and a little westward fully sixty miles in the past thirty years. Peaches grow in constantly increasing quantities at many other points in the United States—north, south and west. Earlier peaches are grown in Georgia, bigger peaches in California and, perhaps, later peaches in Connecticut, New York and the lake states of the West, but no other similar area in the United States or in the world grows so many peaches and, on the average,

peaches so good, as this peninsula. The peach season here is longer than elsewhere, and the fruit is the best sent to the markets of the great northern cities. Nowhere else in the world have peaches been grown so long in great quantities for market, and in no other region is the peach relatively so important a crop. Delaware has been the chief peach growing region of the world for nearly half a century, and in spite of many discouragements and ill forebodings, in spite of ravaging disease and increasing competition, it is likely to retain its supremacy for many years to come, perhaps for many generations.

"The peninsula peach crop of this year is one of the largest in the history of peach growing, though some hundreds of thousands short of three or four famous crops of the past thirty years. The railways that net the peninsula are making ready to send 5,600,000 baskets of peaches to market. That means 168,000,000 pounds of fruit, or 84,000 tons. Besides all this there will be another 1,500,000 baskets sent to market by water or used in the canneries and evaporators, to say nothing of the immense quantity consumed at home. This peninsula will send its peaches to all northern and western cities within 1,000 to 1,200 miles of this point. Peach trains from here, or corresponding points in the peach region, reach Jersey City in fourteen hours, Boston and New England cities in thirty hours or less, Cincinnati and places in the Ohio valley in thirty hours, and Chicago in thirty-six hours. Peaches kept in motion will carry in good order to the most distant place named, and if need be half as far again, so that St. Paul and the cities in the western states bordering the Mississippi are not beyond the reach of the peninsula peachgrower. Whole trains of peaches are consigned to the great cities and from one to three cars to small places. So long as peaches may go in bulk to their place of destination, and are kept going, they are likely to reach these places in good condition. It is stopping and handling that destroy the peaches and make them unfit to eat. The railway charge from Delaware to Jersey City on a carload of peaches of six hundred baskets is $100, and to more distant points in proportion. The interstate commerce commission has decided these rates to be excessive, and peachgrowers hope for something better. Peaches are plucked by hand when hard, but handsomely colored, culled by machinery and packed in baskets, often with a few leaves on top by way of garniture. They are carried from farm to railway station in light wagons specially constructed for the purpose and arranged to hold a double deck of peach baskets. The driver is a negro, and the team is a pair of horses or mules. The peach season throughout the peninsula sets in between the middle and the last of July, continues to increase in activity until the last week of August, is brisk well through September and ends late in October.

"It is estimated that there are more than 7,000,000 peach trees on the peninsula, which would indicate an area of nearly 70,000 acres planted in peach orchards. When New Castle county, now almost abandoned for peach raising, was the chief peach region of the country and peach farmers made from $5,000 to $20,000 a year from that crop alone, a single peachgrower sometimes owned 150,000 trees. There are few growers who own so many now, and an orchard of 50 acres, containing rather more than 5,000 trees, is now esteemed large. Ex-Governor Benjaman T. Biggs, of Delaware, is now one of the greatest peachgrowers in the world, unless indeed some of the California orchards exceed his in size. Much of his peach-bearing land lies in Queen Anne's county, Md., adjoining New Castle county, Del., and if prices are profitable this season he will send to market ten carloads of peaches per day, or more than 250,000 baskets. Other extensive peachgrowers are S. H. Ridgely, of Dover; the Cannon Brothers, of Bridgeville, Del.; J. J. Ross, of this place; E. H. Bancroft and Jacob Brown, of Wyoming, Del.; the Hon. W. T. Hepbron, of Kennedyville, Md., and R. Thomas Cochran."

SOCIETY OF AMERICAN FLORISTS.

The ninth annual convention of the Society of American Florists was held in St. Louis, August 9th and 10th. Among those present were: George Nicholson, curator of the Royal Botanic Gardens, Kew, England; Professor L. Wittmack, Berlin; Victor Lemoine, Paris; E. H. Krelage, Holland. The attendance was about 400. President Smith in his address stated that in 1891 there were 4,659 floral establishments in the United States, employing 16,847 men and 1,958 women; fuel cost over $1,000,000; advertising, independent of catalogues, about the same; florists paid for postage $767,438.21, for freight and expressage $1,088,612.41; the sale of cut flowers, hardy shrubs, roses and other plants amounted to $26,211,805.77; and that it is safe to say there has been an increase of 20 per cent. on these figures since then. Statistics show that the florists of this country send to the Netherlands, Germany, England, France, Belgium and Bermuda over $1,750,372 for bulbs, plants and seeds.

Secretary Stewart reported that the number of members paying dues in 1892 was 829. The number suspended during the year for nonpayment of dues was 214, the number of resignations 40, deaths 4.

Treasurer Hunt's report showed a balance on hand of $2,125.

These officers were elected: President, J. F. Anthony, Chicago; vice-president, Robert Kift, Philadelphia; secretary, William J. Stewart, Boston; treasurer, M. A. Hunt, Terre Haute. The next annual meeting will be at Atlantic City, N. J.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months.....50
Foreign Subscriptions.....1.25
Six Months.....75

Advertising rates will be sent upon application.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., SEPTEMBER, 1893.

THE FINANCIAL SITUATION.

The nurserymen have found the scarcity of money throughout the country of serious consequence to them in the collection of accounts. Particularly is this true of western states where in many cases large sales were made. This stringency came at a particularly unfortunate time, for nurserymen were beginning to think that more than the usual number of causes were accumulating to cut down the profits.

But undoubtedly all are going to do the only thing that remains—wait until there is an improvement in the money market. It is believed that there will be a steady though necessarily slow recovery from this time. The results of farming industries will be apparent in a short time; money is flowing back from Europe; there has been a check to the extensive operations which were being carried on with small capital or upon a basis other than cash, and the hope that something definite may result from the work of Congress will do much to restore confidence. It is probable that soon the money that has been stored away will be forced into circulation by the resumption of business. At all events it is a time for renewed effort rather than submission to discouragement.

RESULT OF THE WORLD'S FAIR EXHIBIT.

The criticism which we have felt must inevitably follow the first inclination to overlook the deficiencies in the classification, arrangement and character of the exhibits in horticultural hall at the World's Columbian Exposition is finding expression in quarters where it cannot fail to carry conviction. It is true that the criticism should be made in a spirit of sympathy, because the time allowed for such an undertaking was insufficient, and many difficulties had to be contended with. That standard publication, *Garden and Forest*, has spoken, and its views coincide with those we formed during a visit to the Fair early in June. The extent and variety of the exhibits are of great interest to all, but the poor arrangement leaves the visitor unsatisfied. *Garden and Forest* very pertinently calls attention to these facts: While California, New York, Oregon, Washington, Idaho, Missouri, Minnesota, Wisconsin, Illinois, Maine and Ontario have made creditable displays, these states do not represent the pomology of North America, and as for foreign countries, only New South Wales and Italy have made any attempts to show fruits; the proper basis for a comprehensive pomological display is fruit and not states; the viticultural displays are among the most decorative in the horticultural department, but, unfortunately, there is little of genuine horticulture in them; they are made up principally of wines and brandies with a flavor of mineral waters, subjects which belong to manufacture and mining rather than to horticulture; in the line of ornamental plants the exhibits are made mostly by firms instead of states; an exception to this fact is the dome where New York and Pennsylvania have contended for the questionable honor of having filled the immense space with an unfortunate jumble of plants; the educational effect of the horticultural exhibits cannot be great or at all commensurate with their cost.

We have already called attention to the fact that the nursery exhibit is anything but representative. True, the number of exhibitors in this line is small, but the few are not given the opportunity that could be desired. Upon a future occasion doubtless the experience thus gained will prove of value both to exhibitor and manager.

THE FRUIT INDUSTRY.

The rapid extension of the industry which has to do with the production of fruit during the last few years cannot have failed to impress all who are interested in any of the departments of such production with the importance of the industry and the prominent place it has taken in the products of the country. That the industry is regarded as one of the most important is shown by frequent instances. Of course, the horticultural and pomological societies of the country are naturally the first to bring to light the advancement made in a particular line, or in general, during a season; but it is often the case that outside agencies pick up the interesting features and promulgate them to the great advantage of the fruit growers and not infrequently to that of others.

It is natural that the great state of California should take pride in fostering as one of its chief industries the production of fruit. It is probable that, as in the case of all successful undertakings, there is danger that the business will be overdone. But this fact does not deter the state authorities and individuals from making every effort possible to advance the interests of the fruit pro-

ducing industry. For instance, the State Board of Trade of California, has requested the railroad companies to collate for publication the tonnage separately of different classes of fruit products of the state. In its instructions to agents the Southern Pacific Railroad company says :

These statistics are useful in many directions, but especially in preventing the over-production of any particular article. In addition to the items called for and specified in the circular No. 3078, agents are required to request shippers to specify on shipping orders and shipping receipts the particular kind of fruit offered for shipment. If citrus fruit, state whether oranges or lemons ; if green deciduous fruit, give particular kind ; if dried fruit, state particular kind if possible ; if canned fruit, give name of fruit if possible. As these statistics, which it is proposed to keep, are directly in the interest of the producer, it is hoped shippers will co-operate with the railroad company in furnishing on their shipping receipts and orders full particulars of article or kind of fruit shipped, that same may be noted on waybills and properly collated by our auditing department. In doing this work the Southern Pacific Company incurs considerable expense, and it is hoped that shippers will, by their co-operation, make the work as complete as possible, and thereby accomplish the end desired by the State Board of Trade.

This is but one of many instances which might be cited showing what is being done in fostering and advancing the industry. Other states are doing much, but might they not do more ? Are the nurserymen fully alive to the advantages to be gained by co-operation, by the passage of needed state and federal laws, by educating the planters along lines which shall remove prejudice and which shall stimulate a desire for the cultivation of those kinds of fruit which will prove profitable ?

Too much cannot be said in deprecation of the plan of management of the World's Fair which prohibits the taking of photographs by any one except the official photographer, except by means of hand cameras of certain sizes, and then only upon payment of $2 per day. Perishable exhibits are passing away daily with no opportunity of preserving illustrations of them. There are numerous indications that the big Fair is in many respects too extensive for the proper administration of those who have been intrusted with it. Ordinary errors of judgment could be overlooked but wide departures from a course which is natural and in every way beneficial deserves a rebuke at every opportunity.

An international exhibit of fruit culture will be held under the auspices of the Society of Fruit Culture of Russia at St. Petersburg in the autumn of 1894. Its object is stated to be "to show the present condition in Russia and other countries of the cultivation of fruits and vegetables, of viticulture, the cultivation of medicinal plants, horticulture, and of the manufacture of their products." A congress of pomologists will be convened simultaneously with the exhibition, and all persons interested in horticulture and pomology, whether in Russia or in other countries, are invited to participate in the exhibition.

PAPERS ON TRADE TOPICS.

The following papers were presented at the recent meeting of the American Association of Nurserymen :

THOUGHTS ON EVERGREENS.

Robert Douglas, Waukegan, Ill.

On a lovely morning in March, as I was preparing for a ramble through a canon in California, I received a notice from our worthy secretary, informing me that I had been appointed to read a paper before this convention, entitled, "Thoughts on Evergreens." How I wished to compress the thoughts of fifty-seven years into half that number of minutes, but this could not be ; therefore I concluded to confine my thoughts to evergreens growing in the canon I was about to explore, which consist of Redwood, the Baytree, the Madrona, and the evergreen oaks, but when I saw that the Redwoods, which were immense trees at the time this continent was discovered, had been cut down over forty years ago, and that the hunter's fires had followed the woodman's axe, "coming events cast their shadows before," and my thoughts went forward to the condition of evergreens at the end of fifty-seven years.

I herewith take a glance at the first fifty-seven years, and leave the second for a younger member of this convention to report on in the future. I well remember sailing up the St. Lawrence River in May, 1836, when in sight, for the first time, of an indigenous evergreen forest, saying to myself, "Well, now I can ramble in the woods to my heart's content." No gamekeepers here ! No finger-boards cautioning me to beware of man-traps and spring guns. We reached Quebec May 21st, in the midst of the spring fleet, as even at that early day vessels came from Great Britain in great numbers, making two trips each year, spring and fall, coming in ballast and going back laden with lumber, which was brought from the interior to Quebec In 1873 I traveled from Quebec to Niagara Falls, forests everywhere in sight, farmers girdling the trees and growing farm crops among the gaunt dead pines, which looked like goblins on a moonlit night. On my way to Vermont, in 1838, I saw fields fenced with white pine stumps, only a little way east from Troy, N. Y. East of Bennington, Vt., they were cutting down the timber and making it into charcoal. On the eastern side of the Green Mountains farmers were felling the trees in windrows and burning them. During the spring of 1844, I traveled through virgin forests in Michigan. The northern part of that state was then covered with white pine, and the same was true of Northern Wisconsin and Minnesota. I never imagined at that time that lumber would ever become scarce in this country, but when I traveled to the Pacific coast, in 1849, and had passed through more forests in the first four miles from the shore of Lake Michigan than all the

rest of the way to the base of the Sierra Nevada mountains, I became convinced that the time was not far distant when this country would regret the wholesale destruction of its noble pine forests. In 1868, and many years since that time, I have traveled in Colorado and other far western states and territories, and found many fine forests of evergreens, but the axe and the fires have destroyed them, and valuable evergreens will never grow there again. For several years I have longed for a sight of evergreen forests as I saw them long ago, but did not accomplish it until last year, when in company with my son Thomas, we spent the late summer and fall in the forests of Washington, Oregon and Northern California. Day after day for two weeks, in the forests around Puget Sound, going out mornings on steamboats to different localities, and returning evenings, spending the daytime in the immense forests, trees one to two hundred feet taller than the tallest trees on the Atlantic slope. Here history is repeating itself, and I was laughed at for my prognostications, same as I had been laughed at on this side of the continent a generation ago.

Where will you find your evergreen forests on the five hundredth anniversary of the discovery of America? My belief is that you will find them where the evergreen forests have been cut down and burned over, for nature is more provident than man, and will do the best she can, but the evergreens that nature will produce on these cut-down and burned-over forest lands will be neither ornamental nor useful. The same fires that swept away every vestige of the trees and seeds of the valuable and ornamental evergreens open the persistent cones of the scrub pines, so called, that remain unopened on the trees for many years, apparently waiting for the fires to open them. I have counted fifteen years that some of these cones have remained on the tree unopened.

You have the Wisconsin gray pine, Pinus Banksiana, already replacing Pinus Strobus, the white pine and Pinus Resinosa, the red pine, in Wisconsin and Minnesota.

The pine is covering the burned evergreen lands in Colorado and the Rocky Mountain districts, and several species of worthless pines occupy the burned pine lands, both in the far West and in the South, but even these worthless pines have to fight with other comparativly worthless trees for a foothold, for the aspens and other poplars, the willows, birches, and like kinds producing seeds that are carried long distances by the winds, find the burned lands in finest condition for germinating delicate seeds, and divide the land with the thistle, which delights in burned lands. Darwin says the oaks are driving the pines to the sands, but without forest fires the oaks would make little headway. There are oaks in every pine forest that I have explored. Fires cannot destroy them, they are gaining ground continually, as far as my observation goes.

There are other causes operating against valuable evergreens. Nature has a vast family to feed, aside from producing seeds to continue the species. Passenger pigeons, mourning doves and other birds and squirrels must be fed. The white pines produced millions of seeds when the trees were in plenty; the birds are now taking all the seeds where the trees are scarce. Then, again, evergreens with delicate foliage are not able to compete with the coarse kind; they are scorched and killed if the sun reaches the seedlings the first year, and they "damp off" if in too deep shade. I noticed this especially in Eastern Tennessee and in Northern Carolina, where I had abundant time, and could see the advantage the old field pine had over the white pine. When in evergreen forests I always have an eye on the young trees and seedlings, and when they are scarce I try to find the cause. While passing through an extensive forest of Pinus Lambertiana, the large sugar pine, I noticed that the young trees and seedlings were remarkably scarce, while evergreen seedlings of other kinds were creeping in around the edges in vast numbers. The old trees were bearing cones in quantity—huge cones, 15 inches long and 12 inches in circumference; squirrels, wild pigeons and crows were feeding on the seeds. The cones hang from the extreme point of the upper branches, bending the branch with their weight. The large squirrels go from branch to branch, cutting off the cones, and then gather them together at the base of each tree; cut the cones in pieces, and leave, in many instances, over a bushel of cones at the base of each tree, leaving not a single seed that I could find. In my rambles through the Redwoods, I noticed the scarcity of seedlings, indeed, I never found ten seedlings in a six hours' search, except once, where there had been new cutting and filling on a railway track. Examining the seeds carefully I found about 98 per cent. abortive, but this tree has an advantage over all other conifers, in throwing up a circle of young trees around the base of each cut-down tree, therefore, better prepared to hold its own than any other valuable conifer with which I am acquainted. When we reached the Brewer's Spruce (Picea Breweriana), the scarcity of seedlings and small trees was remarkable; but the next morning fully explained the cause. Squirrels were busily engaged in cutting off the cones, cropbills and grosbeaks were tearing the cones to pieces on the trees, and the little snowbirds, that are so troublesome on our evergreen seed beds at home, were picking up the scattering seeds.

Now all of these trees known to exist do not exceed 100 in all. In what other way can we account for the scarcity? Yes! On the five hundredth anniversary of the discovery of this continent there will be choice native evergreens in America, but, like the buffalo, the elk and

the antelope, they will be confined to public parks and private grounds.

THE FUTURE OF THE WESTERN PLAINS.

C. S. HARRISON, FRANKLIN, NEB.

That portion of the country in Kansas, Nebraska and Dakota lying west of the 100th meridian to the Rockies is a bleak, dry, wind swept region, lying at an elevation of about 3,000 feet above the sea level. The land for the most part is fertile—some portions extremely so. The rains are very uncertain. There will often be a long period of drought broken by violent cloud bursts and often fearful hail storms. It takes a good deal of courage to settle in this region, though it has some advantages. It is generally very healthy and a man can work about twice as much land there as in Illinois. At the eastern limit of this region one will average a fair crop every two years. Sometimes if rain is abundant the yield will be enormous. Further west a man may not get a good crop oftener than once in three years. Irrigation is out of the question. There are few streams, and artesian wells are uncertain. Protracted drouths seem to dry up every living thing. Often those trying to raise timber on timber claims have paid more to raise trees than the land was worth. Yet it is too good a country to be wholly abandoned. What shall we do with it? How can we protect it and adorn it and make it home-like?

It is hard to make even deciduous trees grow in this region. Many a poor fellow has worked hard for his full complement of trees, to prove up on his claim and has lost them all. My experiments have proved that the most of this vast section can be made beautiful and attractive. The tree of all others to solve this problem is the Pinus Ponderosa. This pine grows along the foot hills which border on the dry belt. You find them on the high bold bluffs of Northwestern Nebraska where it would seem nothing could live. Often they cling to the verge of towering precipices and wave defiance to drought or storm. How they can ever be propagated or grow is a wonder. But there they stand on the skirts of this vast region ready to invade it on the slightest encouragement. Ordinarily they are hard to transplant. Taken from the mountains and planted in open ground, 75 per cent. will die. The better way is first to put them under a screen for a couple of years. They are readily raised from seed, though they have a bad tendency for damping off. But careful experiments will prevent this. Then at the age of three years they may be planted in the open ground to grow two years longer, when they will do for wind break and forest planting. Success, however, will depend largely on the season. They must not be planted in a very dry time; wait till the ground is well soaked, and there is a cloudy season; then you will succeed. I have planted hundreds at a time without the loss of 5 per cent.

Under the 100th meridian the Scotch and Austrian and even White pine will succeed for a time, but I know they are doomed. The Ponderosa will attend the funeral of every other pine tree on the plains, and then go on to a grand old age The tree seems endowed with a marvelous intelligence. I have known it to throw out a root 200 feet after water, and often I have noticed groves on barren mountain sides, where the trees seemed in danger of drying up. With great prudence they take in sail, dropping sometimes three-fourths of their long needles, retaining just enough to pull through with. They do not do well in a wet climate If they did they would be a great attraction. I have trees growing within sight of writing this, which are of the richest green, and have needles 10 inches in length. Under good cultivation they are very rapid growers, and are destined to be the saw-log of the plains.

Next to them is the Silver cedar of the Rockies. This is a branch of the great Red cedar family, but for ages it has been accustomed to hardship, growing on the ledges. Let these trees once be fairly started and well cultivated for a few years and they will take care of themselves. With care also, many things will thrive, which we thought could not grow. I have 40 kinds of lilacs, but they do not bloom every year. But once in a while they come out in their full glory. The Chinese Weeping lilac is a late bloomer, and now (the 5th of June) is preparing for a magnificent display, while none of the others have succeeded, owing to high winds, and a very dry time. I have spent thousands of dollars finding out what I couldn't do, and have been compensated with finding out what will succeed. Jackson Dawson, that prince of horticulturists, who has charge of the great Boston parks, has sent me many choice things, and I find many things that do well. Snow balls, syringas, and honeysuckles do well. A patch of iris which can be irrigated from the well, does finely. For ten years I have been on the verge of this great American thirst land, trying this and that, having at this experiment station perhaps 500 trees and plants, common and rare, and I love to think what can be done in this region. Eastern Nebraska has been deemed the paradise of the horticulturists. But 200 miles west of the Missouri river conditions change rapidly. Yet I think men will arise equal to the occasion. The governor should take the matter in hand. Hon. E. B. Fernow, chief of the National Division of Forestry has been out to visit me. He took a trip with me in the mountains, and he was so much impressed with the Ponderosa that he bought several thousand seedlings for planting in the Western sand hills and was rewarded with fair success.

If the governor could suspend "river and harbor" for a year and give the proceeds to these vast regions it would be a wise thing. The heroes of the vast plains need some encouragement.

From Various Points.

A new peach, "Porterville Excelsior," said to have originated at Porterville, Tulare county, Cal., is in the market.

Frederick Law Olmsted who originated the plan of Central Park, New York, has been honored by Yale and Harvard colleges with the degree of Doctor of Laws.

There will be a scanty crop of apples in Western New York, especially of the winter varieties, Baldwins in particular. The New England states report the same conditions.

The peach crop promises to be greater than ever before. Delaware and Maryland will ship 4,000,000 crates, California as many more, and New Jersey 2,000,000 crates.

Some 3,000 acres of peach lands in the Georgia peach belt were lately purchased by a syndicate of northern capitalists, and immense peach orchards will be planted next season.

The Western New York Horticultural Society, through its secretary, John Hall, is preparing for the annual exhibition of fruits by the society at the Western New York fair. The society won first prize two years ago and second prize last year.

Sixty-six carloads of fruit were hauled over the summit of the Sierra Nevadas yesterday on their way east, while the daily average for some weeks has been between fifty and sixty cars. Six 12-wheeled compound locomotives are doing little else but hauling these fruit shipments, says the Sacramento *Bee.*

Solano county, California, reports an acreage of 2,858 in grape vines and fruit trees as follows: Peach, 299,000; apricot, 227,000; pear, 186,000; French prune, 123,000; other prunes, 51,000; almond 91,000; cherry, 26,000; fig, 14,000; olive, 6,378; orange, 4,452; walnut 4,300; apple, 2,248; lemon, 208; other kinds, 1,559. Total, 1,039,382 trees.

The American Chrysanthemum Society elected the following officers at its annual meeting in St. Louis, August 9th: President, Elijah A. Wood, West Newton, Mass.; vice-president, E. G. Hill, Richmond, Ind.; secretary, E. D. Smith, Adrian, Mich.; treasurer, M. A. Hunt, Terre Haute, Ind. The next meeting will be held in Philadelphia during the second week in November.

At the eleventh annual meeting of the American Seed Trade Association at the Leland hotel, Chicago, on August 14th, the following officers were elected: President, W. Atlee Burpee, Philadelphia; first vice-president, D. D. Bushnell, St. Louis; second vice-president, S F. Leonard, Chicago; secretary and treasurer, A. L. Don, New York. The association will meet next time in Toronto.

An immense fruit farm among the hills of Jefferson county, West Virginia, is announced by the *Post* of Washington. In 1887 the Becker brothers planted 33,000 peach trees, since which time tract after tract has been added, until the farm now comprises 2,400 acres. The fruits planted are peaches, grapes, quinces, cherries, Japanese plums, apricots, persimmons, nectarines, English walnuts, Italian chestnuts and paper-shell almonds.

In an article on the canning industry in California, the San Francisco *Chronicle* of July 27th says that of about 25 canneries in that state possibly ten are in operation, and these at one-half or less than that proportion of their full capacity. Many of the packers are simply filling a few orders which they have received, and their operations are but nominal. Of about fifty fruit-drying establishments in the state, less than one-half are running, and these at far below their capacity. There is a large crop of the finest fruit in the world, but the general financial depression, which seems to effect the commercial world in periodical waves, has caused a stagnation which has included in its baneful influence the great fruit industry of California.

The judges of award in horticulture at the World's Fair have organized. That under pomology, which includes manufactured products, methods and appliances, nursery stock, etc., embraces the following officers: W. A. Ragan, superintendent of awards; Thomas Pugh, New South Wales, president; I. Fromm, Germany, vice-president; and C. W. Garfield, Michigan, secretary. The judges are Thomas Pugh, New South Wales; I. Fromm, Germany; C. W. Garfield, Michigan; R. H. Warder, Ohio; E. F. Babcock, Arkansas; L. Woolverton, Ontario; W. H. Manning, Massachusetts; B. Starratt, Nova Scotia; Miss C. R. Stocker, Georgia; G. I. Motz, Alabama; E. S. Hubbard and A. B. Hawkins, Florida; Prof. Wittmack, Germany; Peter Zanon, Italy.

The Florists' Hail Association met in St. Louis August 10th. President J. M. Jordan presided. Secretary J G. Esler reported that in the five years preceding August 1, 1892, the association paid losses amounting to $3,028.11. During the year. ended August 1, 1893, the amount paid was $5,856.83. The association has 496 members. There is insured 2,247,012 feet of single thick and 2,583,768 feet of double thick glass. The amount received during the year for insurance was $1,406.69, of which $575.47 is membership fee and $831.22 is assessment fee. The reserve fund amounts to $3,107.12. The percentage of loss during the year has been one square foot of single thick glass to 37.66 square feet insured, and one of double thick to 93.28 insured; 59,665 square feet of single thick and 27,712 square feet of double thick glass has been paid

for during the year. Treasurer J C. Vaughn's report showed cash on hand $1,679.20

Professor Maynard, of the Massachusetts Agricultural College, announces that a giant Century plant in the greenhouse at Amherst is now in full bloom. It is a specimen of the striped variety of Agave Americana, and it is said to be probably the largest plant of its kind under glass in America. This specimen originated at the old Ames homestead in Chicopee, Massachusetts, about 1825, and was presented to Mrs. Hitchcock, the wife of President Edward Hitchcock, of Amherst College, by Mrs. James T. Ames, in 1838. It was used as a lawn plant for about thirty years when it was given to the college. Since then it has been grown on a mound of prepared soil some fifteen feet by fifteen at the base, eight by eight at the top and five feet high. The flower-stalk is eighteen feet high, with a panicle containing over 3,000 buds and flowers, and the whole plant is estimated to weigh about a ton. The flowers are greenish yellow, two inches long by one inch broad, with six bright yellow stamens exserted some two inches beyond the floral envelope

Among Growers and Dealers.

William C. Barry spent a portion of the summer in the Adirondacks.

The Silas Wilson Nursury Company has been incorporated at Atlantic, Iowa, with a capital stock of $150,000.

Eugene Germain, proprietor of the Germain Seed and Nursery Company of Los Angeles, Cal., has been appointed United States Consul at Zurich. He will assume his duties October 1st.

William Parry, of the Monmouth Nurseries, Parry, N. J., has sent out specimens of a new apple, called the Starr, which originated in Southern New Jersey. It is a large, smooth, green apple, sub-acid. It has not yet been placed upon the market.

Frank Ford & Son of Ravenna, O., are of the opinion that those who are criticizing the Crandall currant, have gotten hold of a currant that is not the Crandall. They meet the criticisms with the statements of a large number who have tried the Crandall and who pronounce it a valuable fruit.

Asa D. Barnes of Waupaca, Wis., writes: "I have nearly 300 Northwestern Greening apple trees in my orchard, some of which are yielding 2¼ bushels of apples the fourth year after planting. I write this in proof of Professor Bailey's article on adaptation in the July number of the NATIONAL NURSERYMAN. This orchard stands within 15 miles of the original seedling Northwestern Greening tree. I have for some years claimed that adaptation and acclimation are at least two of the essentials for successful orcharding in our arctic Northwest."

INSPECTING NURSERY STOCK.

The commissioners for the several districts of the state of Washington, appointed to inspect orchards and the condition of nursery stock sent to planters for use in that state, have made reports to the State Board of Horticulture.

Commissioner Chatfield, of the first district, says: "I believe that one of the most important subjects the State Board of Horticulture has to deal with is nursery stock. This ought to be carefully looked after. All precaution should be used to prevent unscrupulous nurserymen or agents from imposing worthless or infected trees on innocent purchasers. Certainly, a sufficient portion of our appropriation should be applied in thoroughly inspecting all trees in, or that may come into the state. We were brought into existence to further the horticultural interests of the state of Washington, and, as far as the appropriation goes, let us do our work well."

Commissioner E. L. Von Gohren, of the third district, says: "There has not been any complaint or any request made to me for inspection since the October meeting, although there has been a large amount of nursery stock shipped to this district from eastern and southern nurseries, sold and distributed by agents without a certificate of inspection, thereby violating the rules of the board, and it is impossible for the inspector of a district to visit all portions of his district, or to find out when and where nursery stock is being sold and distributed by agents for nurseries outside the state who have not certificates of inspection, without the earnest co-operation of all fruit growers and others interested in fruit culture. In my opinion, it would be well next season to station three or four inspectors at the main distributing points in the state to inspect all nursery stock shipped into the state before allowing it to be re-shipped to its destination, or some other equally effective method."

Commissioner H. H. Spaulding, of the sixth district, says: "A large acreage of young orchards has been planted during the last season, and I am sorry to say that the majority of the orchards planted during the last two years in the eastern part of the state have been imported trees of a very inferior grade, and more or less infected with fruit-tree pests. Although the state fruit inspector, D. M. Jesse, has devoted a good part of his time in looking after imported trees, it was impossible to examine them all; and right here I wish to say that this part of the state is the most exposed portion of the whole state, and needs more help to look after its fruit interests. A good live man should be stationed at Spokane to help look after the fruit interests there, especially during the planting season."

John T. Blackburn, commissioner of the state at large and president of the State Board of Horticulture,

says: "Since the last regular meeting of the State Board I have received several notices to examine nursery stock, but only one to visit orchards that were infested with injurious pests. As the board did not order any extra work at that meeting to be done, I reported only when I was notified and make account only on these visits, although I have visited several orchards where it was known that the oyster shell bark louse was on the trees, and have assisted and given instructions how to get rid of these pests.

"I find that these pests have been left alone in many instances without molestation since the trees on which they are now preying were planted, and in one orchard of 600 trees, planted three years ago, quite a number of them are killed by this pest. This scale came with the trees from the nursery, as there were no other fruit trees within half a mile of them for some time after they were planted, and there are none now infested with this pest, hence we see the necessity of inspecting nursery stock before being planted. On this line I have endeavored to interest prospective planters to insist on seeing the certificate properly filled out and signed by some member of the board before taking the trees. My opinion is that this kind of education will be conducive of much good, from the fact that when nurserymen inside and outside the state know that the planters generally are alive on this important subject, they will be more careful to have their stock clean. I would suggest that the board use extra measures for accomplishing this end. I also realize the fact that we cannot be too careful in our inspection of such stock. The orchard to which I refer is damaged hundreds of dollars by planting of this oyster shell scale.

RECENT PUBLICATIONS.

Wyckoff, Seamans & Benedict, manufacturers of the Remington Standard typewriter, have issued a handsome map of the Columbian Exposition.

The official report of the eighteenth annual meeting of the American Association of Nurserymen has been issued by the secretary. A photo-engraving of President U. B. Pearsall adorns the publication.

"A Reader in Botany" in two parts, "From Seed to Leaf" and "Flower and Fruit," by Jane H. Newell, forms a pleasing introduction to the study of botany. It is extremely simple and its steady advancement of the pupil through the various departments of plant life is one of its most interesting features. Boston: Ginn & Co.

The issue of *The American Florist* for August 3d, is a convention number and Columbian souvenir, in honor of the annual convention of the Society of American Florists in St. Louis. It is a handsome issue of 68 pages, profusely illustrated. The chief feature is the presentation of the portraits of 416 florists, members of the American Society. There are also handsome photo-engravings of interior views of Horticultural Hall at the World's Fair.

The World's Fair will not be permitted to live only in the memories of those who saw it, and in the files of newspapers. The Bancroft Company, Auditorium Building, Chicago, have in preparation what they call THE BOOK OF THE FAIR, which will be a permanent and illustrated chronicle of the exhibits. The text is by Hubert Howe Bancroft, and the illustrations profuse. As pointed out in the preface, the exhibition of 1851 was contained in a single edifice of one million square feet, while the space occupied at the World's Fair of to-day is eight or nine times as great.

A veritable compendium of valuable information for all, and for the horticulturist and nurseryman in particular, is "Barry's Fruit Garden," by that recognized authority, the late Patrick Barry. A new edition, revised by the author in 1883, has been issued. While the author does not claim that the work is complete, it appears that he has so treated the subject as to make it all that is needed in the consideration not only of the general principles but also most of the essential details. The work comprises 516 pages and is arranged in four parts: General Principles; The Nursery; Laying Out; Arrangement and General Management of Permanent Plantations of Fruit Trees; Select Varieties of Fruits; Gathering and Preserving Fruits; Diseases; Insects; Implements. The part devoted to the nursery has attracted the attention of nurserymen throughout the country by reason of the experience of the author. It has been a guide to many who have looked about for just such information, and it has aided materially the efforts of experienced growers. The entire work is of great value as a book of reference. New York: ORANGE JUDD CO.

There is something almost inexpressibly delicate and refined in that beautiful production by George H. Ellwanger, "The Garden's Story." The subject in itself so delicate—the study of the flowers—has been treated by a master hand. There have been written articles and books upon the garden by many, but never before has the reader been transported in so delightful a manner into inner recesses at whose entrances all other writers seem to have stopped. The author appropriately states in his preface that there are not half enough contemporary works on the garden; there never can be too many. He has arranged his chapters so as to present the various aspects of the garden from early spring until late autumn. In his first chapter, "The Garden in Anticipation," he fascinates the reader with his familiarity with the subject, and the ease with which he introduces a receipt for the composition of a rose *pot pourri* or explains how one may have at trifling cost a violet-bed which yields its wealth of blossom when other out-of-door flowers are still buried beneath the snow. Mr. Ellwanger writes of the hardy flower garden and in the interval which elapses between the "matins of the first snow-drop bells and the vespers from the last monk's-hood spire," there is a deal of information interestingly imparted. The book should adorn the shelves of every library. New York: D. APPLETON & CO.

The well-known publishing house of Funk & Wagnalls has undertaken a great work in compiling and publishing "A Standard Dictionary of the English Language." The work has already required several years of preparation, and it is now well on its way toward completion. More than 200 specialists have been employed in the various departments as editors at a cost of $300,000. It is estimated that the entire outlay will be $500,000. It is intended to include all that has been lacking in other dictionaries, and revise such matter as has been given, in the most approved form. While it is the intention of the publishers of this great work to make it of interest and value to all professors, teachers, and students, it has also been their aim to make a dictionary for every day use in the family by carefully explaining technical terms and systematic names. There are many distinguishing features to be found in the book that will make it of great value to all classes of readers and students. The etymology is placed after the definition of the word thereby doing away with confusing signs and abbreviations between the word and its meaning. In the definition of words the common or best understood meaning is given first, instead of the historical order which has been the practice heretofore in dictionaries. In the quotations given to verify or illustrate the meaning, the book and page in which it is found as well as the name of the author is given. The pictorial illustrations are very profuse.



Kaiserin Auguste Viktoria.

The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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U.S. DEPARTMENT OF AGRICULTURE RECEIVED DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., OCTOBER, 1893. NO. 9.

THE GRAPE INDUSTRY.

OLDEST GRAPE GROWING REGION IN THE UNITED STATES.

HISTORY OF THE CENTRAL NEW YORK GRAPE GROWERS UNION —SUCCESSFUL RESULT OF POOLING ISSUES—VINEYARDS AND APPURTENANCES VALUED AT $6,000,000—OUTPUT THIS YEAR AMOUNTS TO 12,000,000 BASKETS—THE CHAUTAUQUA GRAPE BELT—HEAVY YIELDS FROM A SINGLE VINEYARD—THE HOME OF THE CONCORD—SOME PROMINENT GROWERS.

For several years the marketing of grapes from Central New York has been quite unsatisfactory to the growers, and the subject of considerable discussion, so much so that at the instance of a large number of growers on Lake Keuka, a meeting of all those interested in the subject was called for Jan. 5, 1893, at Grange Hall, in the village of Penn Yan, N. Y. Hon. William T. Remer and R. B. Ayres, of Penn Yan, were selected chairman and secretary respectively of the meeting. A general discussion was had and a committee was appointed to interest the growers on Canandaigua and Seneca lakes, with power to call a meeting at a subsequent date. After considerable preliminary work, this committee called a meeting for January 19, 1893, at the court house, in Penn Yan. At this meeting Trevor Moore, of Hammondsport, was elected chairman and Berlin H. Wright, of Jerusalem, secretary. A committee of thirty was elected, representing 23 shipping points in the Central New York Grape Belt, with instructions to organize a Union. This committee met on February 7, 1893, at the Benham House, in Penn Yan, for the purpose of organizing a Union, and it was then decided to organize a corporation under the laws of the state of New York, with a capital stock of $10,000, divided into 2,000 shares, of the par value of $5 each, to be known as "The Central New York Grape Growers Union" such corporation to be managed by 13 directors, 6 of whom should be taken from the Lake Keuka district, 3 from the Seneca lake district, 3 from the Canandaigua lake district, and 1 at large. For the purposes of incorporation, 13 of the committee were selected for signing the articles of incorporation, naming themselves as directors. They subscribed for one-half of the capital stock, ten per cent. of which subscription was then paid, and a permanent organization was thereupon effected. The incorporator in each of the several sections entitled to a director then called a meeting in his locality, giving the plan of the organization and suggesting to the growers that they name some one as director for that section, that the incorporators who were then directors might resign, and such person as should be named by the locality, could be elected director in his place. The result of the meetings was that the following were elected directors to fill the vacancies caused by the resignation of the original directors of the Union: At large, Henry O. Fairchild; Urbana, Trevor Moore and George H. Keeler; Pulteney, W. A. Prentiss; Wayne and Barrington, Francis M. McDowell; Jerusalem, Everett Brown; Milo, James A. Thayer; East side Seneca lake, Clarence E. Spence; West side Seneca lake, J. Elbridge Gano and Clark H. Bronson; Canandaigua, Charles C. Wilcox; Vine Valley, Hezekiah Green; Naples, Frank M. Pottle.

On May 9th, the board of directors elected Trevor Moore, of Hammondsport, president; James A. Thayer, of Penn Yan, secretary; H. O. Fairchild, of Hammondsport, treasurer, and Hon. Everett Brown, of Penn Yan, chief salesman. Charles C. Wilcox, of Canandaigua, F. M. McDowell, of Penn Yan, and J. E. Gano, of Starkey, together with the president and secretary, were made the executive committee. Subscription lists were circulated by the directors and each grower was asked to subscribe for one share of stock, sign a contract for one year to ship his entire crop through the Union, subject to its rules, regulations, pooling and inspection. When these lists were brought in it was found that there were over one thousand subscribers, holding considerably more than three-fourths of the entire acreage of the three lakes, Keuka, Canandaigua and Seneca. According to the contract the agreement between the grower and the Union was not to become binding until this proportion of the acreage had been signed, and this being done, practical work was begun. Spraying with the Bordeaux mixture was advised as soon as the shoots were at least six inches in length, and again just after blowing, when the berries had formed, and then with the ammoniacal solution when the berries were at their normal size. This alone has been of great value to the growers, as at the present time one of the finest crops of grapes ever produced in this section is on the vines.

An effort was made to have all baskets conform to a certain size, but the basket-makers had so far arranged for their material that this part of the plan could not be formulated in time to accomplish its purpose. It is hoped that another year this may be perfected, so there

will be a uniform size of baskets used by all members of the Union.

Each section has a local manager and at least two inspectors. The local manager is stationed at a railroad shipping station, and the inspectors at places convenient for the proper inspection of the fruit. No mark is placed on the cover of the basket, except the name of the variety, the Union stamp, and number of the grower. All grapes lose their identity as soon as they pass the local manager, and by him they are reported at the Union office.

The executive committee meets each day and sets the price of grapes to all F. O. B. for the next twenty-four hours. Grapes not sold are consigned to parties in the cities of New York, Boston, Philadelphia, Baltimore and Washington. Daily pools of sales and consignments are made, each variety by itself, until October 1, after that weekly. The expenses of the Union are provided for by the retention of one-half cent per each four and one-half pound basket, and one cent for each nine pound basket, and no more. September 2d, the first shipment, consisting of 18 baskets of Delawares, was made to Messrs. Strang, Adams & Wade, of Washington, D. C. The shipment September 26 was 115,000 baskets. The sales department is in charge of Hon. Everett Brown ; and Jasper O. Smith, a practical bookkeeper, is the financial secretary. The Yates County National Bank is the chief depository, all funds being placed there, and afterwards sent to other banks in the district convenient to the growers, who are sent checks upon their home banks once a week for all pools perfected. These banks have given bonds. The treasurer and financial secretary are also under bonds for the faithful performance of their duties. The sole object of this organization is to market the fruit at the least expense to the grower, and after the expenses are paid out of the amount retained, the balance will be distributed among the members pro rata, according to the number of baskets each one has shipped.

The value of the vineyards in the Union is estimated at $4,000,000, and that of the appurtenances 12,000,000 four and one-half pound baskets. A large amount of the fruit is being sold in western markets, thus relieving the eastern markets of much that has heretofore been sent there. The prices are not what might be desired, yet the promise of a good yield of most excellent fruit will do much toward disposing of it. Already comes the assurance from parties handling this fruit that grapes from the Union are in better demand than from parties outside, on account of better packing and heavier weights. The system of marketing by proper distribution and inspection has already demonstrated the benefits to be derived from a well conducted organization. The Union has opposition, as every move in advance of old methods has always had, but with every department carefully guarded, officers in perfect accord as to details, there can be no reason why this, one of the greatest undertakings of the day, should fail. Mistakes will no doubt be made, yet the principles which underlie the structure are correct, and it is hopeful that success in a great measure will crown the efforts of the incoporators. Fair treatment only is asked of competitors, as the fine quality of the fruit in the lake country, and the superior facilities for transportation offered by the different railroads that have shipping stations in the district, place the markets of the country in a way to be supplied with fruit from this, the oldest grape-growing region in the United States, in good condition. The first shipment was made by Lemuel Hastings, in 1849. The package was a barrel, and the grapes were packed in cedar shavings, planed by Captain Smith S. Fairchild, of Hammondsport, N. Y.

It will be seen that from a small beginning has grown an industry, including the making of wine, to be second to none in the world.

THE CHAUTAUQUA GRAPE BELT.

A recent visit to the vineyards of Northern Chautauqua discloses a scene of activity that must be seen to be appreciated. The harvesting of the main crop has begun in good earnest. It is now generally conceded that in no place in the United States is the Concord Grape grown to such perfection as in this locality. What is known as the Chautauqua Grape Belt extends from Silver Creek, N. Y., on the east, to Harbor Creek, Penn., on the west, comprising a strip of country about thirty-five miles in length and varying in width from two to four miles, and including the towns of Hanover, Sheridan, Pomfret, Dunkirk, Portland, Westfield and Ripley in New York and the towns of North East and Harbor Creek in Penn. According to statistics there were in 1892, 17,500 acres of bearing vineyards in this belt. Of this acreage the town of Portland, in which is located the villages of Portland and Brocton, contains nearly one-third of the whole amount, Westfield, Ripley and Pomfret about one-third more, North East about 2,500 acres, with the balance scattered through the other towns mentioned.

The Lake Shore & Michigan Southern and Nickel Plate railroads, and the W. N. Y. & P. R. R. from Buffalo as far west as Brocton, traverse this section, affording unexcelled shipping facilities. The grapes are shipped to all parts of the United States. The product is handled by various shippers and associations of which the Chautauqua and North East Grape Union handle the largest amount. In no section of the country have the handling of fruit, picking, packing and marketing been brought to such perfection as here.

Shipment of early varieties began about September 1st, or a little before, but at this date (September 25th)

the shipment of Concord grapes has just begun and it will not end much before November 20th. With favorable weather, however, the crop will all be harvested and under cover about October 25th. Of course, to move this large crop of grapes a small army of help is required. The picking and packing is nearly all done by girls and at the present time it is estimated that, in the town of Portland alone, in addition to the residents that work in the vineyards, there are from 1,200 to 1,500 young ladies employed; also a proportionate number of men necessary to do the heavy work, such as loading the grapes, hauling to the packing house, etc.

A few statistics from last year's business will give an idea of the magnitude of this business. The number of cars shipped was 2,600 and the growers received in round figures $1,250,000. The average yield per acre is three tons. Many vineyards, however, will fall below that amount for various reasons, such as poor land, poor cultivation, etc. On the other hand, the best tillers produce much more than that per acre. The Concord vineyard of J. A. H. Skinner of Brocton, N Y., produced last season 1,520 nine-pound baskets per acre. This is about its average yield for several years past and one or two seasons the yield has been larger. Mr. Skinner ascribes his success to thorough cultivation and fertilization, using large quantities of potash every year. He is justly proud of his vineyard and well may be. The Niagara vineyard of G. E. Ryckman has become noted throughout the country for its enormous yield in 1890 of twelve tons per acre.

Probably from 85 per cent. to 90 per cent. of the grapes grown in this section are Concords, although in the town of Portland there are several hundred acres of Niagaras. Other varieties grown to considerable extent are Worden, Moore's Early, Pocklington, Delaware, etc., while the past spring quite a number of small vineyards were set to the Early Ohio.

A Horticultural Institute and Columbian Grape Show was held at Ripley, N. Y., last week, conducted by George T. Powell, and it was a grand success from every point of view. Mr. Powell pronounced the display of fruit the finest he ever looked upon. In addition to laymen there were present Prof. S. A. Beech of the New York State Experiment Station, Geneva, N. Y., Prof. L. H. Bailey of Cornell University and others, besides a large number of local specialists.

Among the vineyard owners are John Farrell of Westfield, who has something over 400 acres of bearing vineyards located on various farms that he owns along the belt; R. J. Quail, Hanover, 100 acres; G. E. Ryckman, proprietor of the Brocton Wine Cellars, of Brocton, N. Y., 150 acres; Jonas Martin of Brocton, (manager of Chautauqua & North East Grape Union,) 200 acres; E. Buckner of Brocton, 50 acres; also, at Portland, Dean Brothers have 150 acres, M. L. Taylor 200 acres, while E. H. Fay, G. W. Marsh and Henry Taylor of the same place are very extensive growers.

The very pleasant nature of this business and the certainty of large paying returns have attracted many outside investors to this locality and many fine vineyards are owned by outside capitalists.

At Portland, also, is located the large nursery concern of the C. S. Curtice Company which makes a specialty of growing grape vines and had this season, in addition to other stock, about one hundred acres devoted exclusively to growing grape vines. As an indication of the enterprise of the people of this section, and their desire to put themselves abreast of the times, may be cited the fact that a paper especially devoted to grape growing, *The Grape Belt*, published at Brocton, N. Y., has sprung up almost in a night into a paid circulation of nearly 2,000 in this immediate vicinity. It is published and ably edited by E. P. Harris.

THE OHIO GRAPE BELT.

There have been lively times during the last few weeks among the grape growers of the Ohio Belt which includes Euclid, Noble, Wickliffe, Willoughby, Mentor, Perry, Unionville, Avon and Dover. The grapes have been sent in so rapidly and in such quantities that several times a "halt" has been called and further receipts have been refused until the market cleared.

The crop is large and of extraordinary quality. George W. Campbell pronounces it far above the average. Near the lake where they often rot, grapes are of excellent quality this year. Prices are ruling low, but the demand is heavy and growers will profit.

Lewis Harms of Euclid, O., writes under date of September 30: "The grapes in this section are about one-half to two-thirds harvested. I think the crop this year will average about one-third larger than last year, and there is also a very large increase in the acreage over last year. It is estimated that Euclid will ship about 5,000 carloads of 3,000 baskets each and it is estimated that at points east as far as Unionville, O., there will be about as many more shipped. The fruit is handled by three associations and one buyer. Most of the fruit is sold on the track where loaded. The prices for grapes this season have ruled very low owing to the large peach crop and the condition of the money market. At present, however, the demand is good and better prices are looked for. The quality of our grapes this season is much better than last year, especially the Catawba. Of this variety many are used for making wine."

THE Western New York Horticultural Society won first prize at the New York State Fair at Syracuse for a general exhibit of fruit. At previous state fairs the society won first and second prizes for the exhibits of the same nature. These results are directly attributable to the indefatigable work of the secretary, John Hall, in urging the members to send fruit.

AN ENGLISH EXPERT'S OPINION.

George Nicholson, curator of the Royal Gardens at Kew, England, recently elected secretary and treasurer of the World's Horticultural Society at Chicago, where he officiated as judge of horticulture for Great Britain, has been visiting the prominent horticulturists and nurserymen of the country. In an interview with a representative of the New York *Tribune* he said :

The famous nurseries of Ellwanger & Barry of Rochester, which cover about 600 acres in all, have about 400 of them in fruit trees. I had no idea that the cultivation of fruit trees had attained such enormous proportions in any one establishment. I saw here, too, great numbers of ornamental trees, some of them larger than I had seen elsewhere. The large office building is situated in the midst of a beautiful lawn, surrounded by trees, and perfect neatness and order prevailed everywhere. These nurserymen cultivate on their own grounds every new variety of fruit they can secure, to test them, but only propagate and sell those varieties whose value they have proved. It is the same with grape vines, of which there are twenty acres of different sorts in cultivation, and they fruit every one and test its worth before they offer it for sale. I saw fifteen acres of roses in all, in perfect health. As an illustration of the care these people take in cultivating stock, I will say that they do not grow the trees twice on the same land in succession. After they have removed one lot they hire another farm, so that fresh ground can be secured, and by this means they always have healthy stock, so that it is a genuine treat to see the products of their care. A handsome pavilion was shown to me, dedicated to the children of Rochester, and built at the expense of this firm, whose public spirit is also shown by the fact that they gave twenty acres of land to be used by the people as a park. Another notable nursery is the one in Waukegan, Ill., where the veteran Robert Douglas, the pioneer in raising forest-tree seedlings in America, still grows conifers in enormous number, especially such Western mountain trees as the blue spruce, the Colorado Douglas fir, and the new spruce named after Professor Brewer of Yale, with long pendulous branches like a weeping willow.

One of the most interesting days I spent in America was in Germantown, where I visited Mr. Thomas Meehan, the Nestor among American tree lovers and planters. I was particularly glad to make Mr. Meehan's acquaintance because fifty years ago he was a gardener in Kew, where he laid the foundation of that extensive knowledge which has enabled him to build up one of the most important nurseries in America. Here I found a larger number of American trees and shrubs than can be found in any other nursery in the world, and it is through Mr. Meehan's efforts I am told, that American trees are now so much more largely cultivated in their native land than they were a quarter of a century ago. In this nursery may be found seedlings of American oaks, elms, hickories, dogwoods, and maples by tens of thousands, and here is the only place, I believe, where many of the rarer trees and shrubs can be had in large quantities. Here, too, I saw remarkable examples of many rare trees. such as the broad-leafed maple of Oregon, the *cedrela* from northern China, the *Hovenia dulcis* of Japan, a curious tree with thick fleshy fruit stems, which are eaten by the Japanese. Mr. Meehan has done the people good service in securing several small parks, including the site of the famous Bartram Garden, which was the first botanical garden in the New World. During the fifteen years since he entered the Common Council of his adopted city he has been instrumental in adding eighteen small parks to the park system of Philadelphia.

"Germantown itself is a place which every foreigner interested in American trees should visit, as the people of this suburb of Philadelphia 100 years ago were especially interested in the introduction and cultivation of rare trees, and the first cultivated specimens of several American trees were originally planted here and may still be seen. Among these is the oldest planted specimen in America of the beautiful Virgilia, or yellow wood of the Southern States, which stands in the grounds of the Germantown Cricket Club, a club, by the way, which has a more beautiful house and is provided with a better laid-out ground than any I have seen in England. The club house, a large brick structure, was designed by one of your New York architects, Mr. McKim, who also made the plan for the architectural walls which surround the field as well as the grand stand, which is the only structure of the kind I have seen which possesses any claim to artistic merit. In this cricket ground is the finest cultivated plant of the cucumber tree that I ever encountered. In Germantown, too, I saw a remarkable specimen of the pecan hickory, which was raised from seed brought from Arkansas by the English naturalist, Nuttall. In Vernon Park, the latest of the parks which Mr. Meehan has acquired for Philadelphia, is the first Magnolia Macrophylla ever planted in America, and here, too, are remarkable specimens of your native papaw, more than forty years old, and with trunks a foot and a half through. The roads of Germantown are shaded with beautiful rows of native trees, and behind them stretch the lawns of innumerable villas.

Another notable town is Flushing, L. I., which I visited for the purpose of inspecting the Kissena nurseries of Parsons & Co., because here were cultivated many of the plants which were introduced to cultivation by Mr. Thomas Hogg, Dr. Hall, and other American travelers in Japan. In this town, on a piece of ground which once formed part of the old Parsons nursery, are three trees of exceptional value—the largest plant of the golden larch of China which I have ever seen, a remarkably fine purple beech, and a weeping beech with a greater spread of branches and larger in every way than I had ever seen before. These noble trees should be preserved, it seems to me, for future generations, for I do not think they can be duplicated anywhere in America. The streets of Flushing are better planted perhaps than those of any country town which I have visited here, and I particularly admired the rows of pin oaks which have been largely used here, and with excellent effect. Speaking of street trees, I may say that on a hurried visit to Washington I was impressed with the systematic planting of the streets in that capital. Taken all around it is the best planted city I have ever visited. Some fifty species of trees are used, and many of the avenues are remarkably beautiful, particularly one in which the gingko tree is used. I have not time to speak of the Botanical Gardens there, or the improvements that I found going on under the care of W. R. Smith, superintendent of the Botanical Gardens, who is another old Kew man.

THE DELAWARE PEACH CROP.

The largest estimates of the Delaware peach crop were exceeded. The crop amounted to more than 6,000,000 baskets, the largest ever grown in that region. The Delaware peaches are marketed throughout the section between Richmond and Toronto and westward to Chicago. Nine cities in this district have taken over a million and a half baskets. Of these cities New York leads with about 600,000 baskets ; Philadelphia took about 480,000 ; Boston, 210,000 ; Wilmington, 120,000 ; Pittsburgh, 48,000 ; Cleveland, 36,000 ; Chester, Pa., 36,000 ; Buffalo, 30,000, and Providence, R. I., 30,000 baskets. Rail shipments to September 5th, were 5,773 car loads, which means about three and one-half million baskets. Another million baskets were shipped by water and wagons, and at least a million baskets more were taken by canning establishments. The balance of the crop was destroyed by storms or accidents. The price obtained was about 35 cents a basket ; and the crop is particularly remarkable because only a year ago the cry went up that the peach orchards of Delaware were suffering from hopeless decay.

JOHN CHARLTON.

One of the most widely known and most highly respected nurserymen of the country is John Charlton. He is thoroughly posted upon all matters pertaining to the trade and his opinions upon horticultural questions are widely sought.

John Charlton was born November 19th, 1835, at Horningsham, Wiltshire England. At the age of 17 he began a three years' apprenticeship at Long Leat Gardens the seat of the Marquis of Bath. He was selected above 23 applicants for the position and paid a large premium for learning the art of horticulture. At these gardens, gardening was carried to a high state of perfection. There was employed constantly a force of 24 men. At the expiration of his apprenticeship Mr. Charlton took charge of a gentleman's garden in the island of Guernsey in the English Channel where he remained one season. He came to America soon afterwards attaining his majority a few days before arriving in New York. His first winter in this country was spent in Hamilton, Ontario. He came to Roceester in 1857 and took charge of the garden of the late George J. Whitney for seven months, then of the gardens and greenhouse of Joseph Hall on East Avenue for three years. When he had been here four years he visited England, remaining one winter. Upon his return he occupied his old situation at Mr. Hall's for four years.

In 1861 Mr. Charlton bought two acres of land at the corner of Culver street and University avenue. He married Miss Sarah McAskie in 1864. In 1865 he engaged in growing flowers, small fruits and grape vines. He was a pioneer in growing grape vines. He built greenhouses and was successful in growing plants, especially fuchsias, for market. In 1883 he stopped growing flowers and gave all his attention to growing grapes, roses, clematis, small fruits, etc.

Mr. Charlton has now about 60 acres covered with stock. He raised the then famous Peter Henderson carnation from seed and sold his entire stock to Nanz & Neuner of Louisville, Ky., for $650.

In 1884 new greenhouses were built to replace old ones. In 1872 he added 10 acres of land and a few years later 15 acres in the town of Brighton; in 1885 he bought 100 acres in Brighton.

In 1869 he introduced Ampelopsis Veitchii from England; he was the first to advertise it in America. He also introduced the well-known Pocklington grape and the Golden Prolific gooseberry. He is an enthusiast in growing roses and now has several promising seedlings. Mr. Charlton has two sons and two daughters. His sons follow in the nursery business. He has exhibited largely at the fairs, mostly with flowers and grapes, and has taken several premiums.



JOHN CHARLTON.

So quiet and unobtrusive has been Mr. Charlton's life that his merits are known thoroughly only by his most intimate friends. His knowledge of botany, both through study and observation is of the broadest kind. His careful course of reading pursued almost uninterruptedly through many years has stored his mind with a vast amount of knowledge which he uses to excellent purpose.

Mr. Charlton stands for all that is noble and progressive in the pursuit of horticulture and the nursery trade.

KAISERIN AUGUSTE VIKTORIA.

We present with this issue a cut of the handsome new hybrid tea rose, Kaiserin Auguste Viktoria, produced by Lambert & Reiter, of Trier, in the province of the Rhein, Germany. This is a brilliant and most effective rose, either for garden decoration exhibition, or forcing purposes. The growth is strong and the foliage large. The flowers, borne on long, strong stems, are of a bright pure white with orange-colored center. The petals are reflexed like the Bride. It is exceedingly free in blooming during the summer and autumn.

AN INTERESTING AND WORTHY PUBLICATION.

EUGENE VERVAET, INDIAN AZALEA NURSERY, SWYNAERDE, BELGIUM.—With thanks I have paid $2.50 for two years' subscription, which I pay willingly for such an interesting and worthy publication as is THE NATIONAL NURSERYMAN.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
305 COX BUILDING, ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months.....50
Foreign Subscriptions.....1.25
Six Months.....75

Advertising rates will be sent upon application. Advertisements should reach this office by the 20th of the month previous to the date of issue.

Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., OCTOBER, 1893.

AMERICAN NURSERIES.

It is often the case that the attention of the busy American needs to be directed by some foreigner to the unparalleled acquirements which the wonderful progress of the century has produced. Instances of this kind are numerous. But to cause a marked impression the foreign visitor must be a man of wide comprehension, long practical experience and keen discernment. Such a man has been among us during the summer months. His observations, extending over a wide range of territory, considering the brevity of his sojourn, he has wisely consented to make public and they have been eagerly read wherever available.

In another column we present an extract from a published interview with George Nicholson, curator of the Royal Gardens, at Kew. What he has to say of the great nurseries of this country which he visited will make every American proud of the advancement of the country in what has come to be regarded in the highest sense an art. Repeatedly Mr. Nicholson encountered in his visits features new to English nurserymen and horticulturists, and he did not withhold merited praise on every hand. Mr. Nicholson could have passed a period of equal length in other sections of this country and found much more in his line to surprise him. He will undoubtedly have many interesting talks with English horticulturists and nurserymen upon his return.

A CATALOGUE OF FRUITS.

Ex-Secretary Rusk of the United States Department of Agriculture, says in his last annual report: "The work on a catalogue of fruits is progressing, and within the coming year it is expected to be able to publish that part pertaining to the apple, as much of the work has been done within the past year. This will be a check list which will give the latest approved name of each variety in accordance with latest established rules for simplifying the names of fruits and also the synonyms. This list will be of great use in helping to disentangle the confused state of pomological nomenclature and place within the hands of the fruit-growers a standard authority."

This is a subject of great importance to fruit-growers, all of whom, it is believed, appreciate the necessity for revised rules by a recognized authority as quickly as they may be obtained. The subject was first presented to the readers of THE NATIONAL NURSERYMAN in a communication from Hon. H. E. Van Deman, Pomologist of the Department of Agriculture. Afterward the American Association of Nurserymen, at its annual meeting in Chicago, adopted the rules of nomenclature of the American Pomological Society.

TREES FOR STREET PLANTING.

In the line of causing a demand for ornamental trees there is great opportunity for cultivating public taste. It may be more difficult to interest the planter in the value of an ornamental tree than it is in the case of a fruit tree, but there is a notable increase in the interest which the public takes in the efforts upon the part of the government, the state and the municipalities to preserve such ornamental trees as may have escaped the axe in the rapid march of "improvement," and to replace as speedily as possible what has been lost.

A movement of significance to nurserymen is the undertaking of the Tree Planting Society of Brooklyn to collect the ordinances of all cities of the Union bearing upon the planting of trees in cities. The secretary of the society, S. L. Collins, has written to the mayors of the principal cities, at the request of the president of the society, A. A. Low, for copies of ordinances regulating the planting of trees. Colonel Culyer, of Brooklyn, in conversation recently with a representative of the Brooklyn *Eagle*, said:

Chancellor Livingston introduced the Lombardy poplar in New York. He had been ravished, as the French say, by its charms, its picturesque effect, as seen on the old roads in Italy. Suffice it to say that as a result of his encouragement thousands of seedlings were planted in New Jersey and the young trees were raised and planted everywhere, only in the end to be found entirely unfitted for street planting, as are all of the poplars, with possibly the exception of the balsam and the North Carolina poplar. Then there was the willow, which numerously prevaded the small parks, the grass yards and the streets of New York and Brooklyn. The catalpa, or smoking bean, a broad-leaved, sprawly and ungainly developing tree, with a fine flower, which unfortunately, like a fruit tree, was a fatal beauty; attracting the small boy, who exists in every age. Then comes the ailantus, the tree of heaven, appropriately enough, from the Celestial empire, and so we have the willow, the poplar, the catalpa, the ailantus—all rapid growing trees, but brittle and readily succumbing to our winds and storms and so comparatively easily disfigured and the first to be destroyed.

The citizen, too busy to make himself acquainted with trees, yet loving them, seeks the commercial vendor of trees for advice,

His order is something like this: "I want a tree in front of my house. Get me a tree that will grow rapidly, plant it and fix it up all right and bring me your bill." Thirty years ago it might have been a willow, a poplar, an ailantus or a catalpa; but more often now it will be the silver leaf or white maple, the most undesirable member of the maple family. This is a word to the wise.

The nurseryman while making strenuous efforts to secure such large orders as are afforded by the demands of newly-laid-out parks, cemeteries and spacious private grounds, should not overlook the importance of cultivating public taste to the end that cities and towns may be induced to complete an ornamentation which in most cases will have been found to have been begun upon a plan that was never carried through.

THE peach crop this year was unusually large and the quality was excellent. The heavy wind storms of the latter part of August caused losses in some localities. THE NATIONAL NURSERYMAN acknowledges the receipt of some fine samples of the Crosby peach from G. H. & J. H. Hale, proprietors of "The Elms" at South Glastonbury, Conn. The Crosby is of superior color and mild and delicious flavor for a yellow peach. It is of good size and the pits are very small in proportion to those of other kinds. The fact that the Hales have been enabled to fruit this peach for eleven successive years in New England is cited as evidence of its frost-proof qualities. During September the Hales shipped 1500 baskets of fruit daily.

REPORTS from various sections state that the retail trade among nurserymen during the summer has been brisk, but the wholesale trade has not yet felt the effect. It is believed, however, that within the next two or three months there will be a decided improvement in the situation as a result of the gradual settling of conditions after the fall shipments have been made.

WE present in another column an article on the grape harvest of 1893 in certain localities. We received fine samples of the early Ohio grape during the last of August from the C. S. Curtice Co , of Portland, N. Y. This grape is of excellent color and flavor and it is a week or ten days a head of other varieties.

SAMPLES of the Pride of Kennett, a new peach which originated at Kennett Square, Chester County, Pa., prove that this is a valuable acquisition to the list of late canning varieties. It is said to be very productive, of large size and excellent quality. It ripens in its native locality from September 20th to 25th.

A SAMPLE of the Vermont Beauty pear proves it to be as attractive as pictured. It is coming rapidly into favor among growers and dealers.

THE apple crop may be comparatively a failure and most other crops may not be all that could be wished, but the reports from the Delaware peach district and the new orchards of Georgia, show that the nurserymen have been busy in those sections in recent years.

CORRESPONDENCE from all points and articles upon subjects of interest to nurserymen and horticulturists are cordially solicited by THE NATIONAL NURSERYMAN.

CORELESS APPLES.

Editor of THE NATIONAL NURSERYMAN:

I have recently found a coreless apple. Five out of six I examined were entirely devoid of any appearance of core. They were perfectly solid. The sixth had a small core. Please let me know if this is not a valuable acquisition in the apple line. The fruit is of the Gravenstein variety. The tree is young and very thrifty. It bore a few apples last year, but it is not known whether they were coreless or not. Please let me know your opinion in regard to it.

Woodland, Wash. HARVEY MCMUNN.

Upon this subject Professor L. H Bailey of Ithaca, writes: "Various coreless apples and pears have been known for a long period. The Menocher no-core apple gained some prominence in this country a few years ago, and the English books describe two or three no-core apples. These apples are simply incidental varieties, and so far, none of them have proved to be of any value. The Bloomless apple, which has come into prominence during the last two or three years, is a very different thing. In this variety, the petals are absent, and it is essentially pistillate The core is really double. Most of the coreless and seedless apples come originally from seed, the same as other new varieties, but in this case certain apples on an otherwise normal tree seem to be seedless. This type of variation is rare in the apple."

The seventh annual convention of the Association of American Agricultural Colleges and Experiment Stations will be held at the Columbian Exposition, Chicago, beginning Tuesday, October 17th. Delegates will be present from each of the agricultural colleges and stations in the United States and Canada. There is annually a total expenditure of nearly $800,000, by the United States Department of Agriculture. The workers, actively employed in carrying on the experiments, number five hundred persons. There are seventy-one directors, one hundred and twenty chemists, forty-seven agriculturists, fifty horticulturists, thirty botanists, thirty-six entomologists, twenty-two veterinarians, fourteen meteorologists, and several biologists and miscellaneous workers. The bulletins issued by the stations are distributed through mailing lists, which aggregate 380,000 names.

From Various Points.

The regular session of the American Pomological Society, will be held in San Francisco, upon invitation of the State Horticultural Society of California, at some time between December, 1894 and February, 1895.

The World's Horticultural Society was organized at the World's Fair, in the office of Chief J. M. Samuels of the horticultural department, on August 22d. George W. Campbell was temporary chairman and Professor L. H. Bailey, secretary. The permanent organization was effected by the election of these officers: President, P. J. Berckmans, Augusta, Ga.; vice-president, Henri L. de Vilmorin, Paris, France; secretary and treasurer, George Nicholson, Kew, England.

The California Nurserymen's Association was formed on August 14th, with these officers: President, G. C. Roeding; vice-president, Leonard Coates; secretary, R. D. Fox, San Jose; treasurer, John Rock; executive committee, W. P. Harman, J. Waters, A. F. Boardman, John Rock, C. C. Royce. The action of the California State Horticultural Society, inviting the American Pomological Society to hold its next meeting in San Francisco, was indorsed.

The nurserymen of Northern California have organized themselves into an association, which already embraces a large membership. The objects of the association are mutual protection, regulation of prices and transportation, controlling the matter of pests and diseases, and to guard against the importation of large quantities of trees from infected localities by dealers and middlemen. Why do not the nurserymen of Southern California organize on similar grounds?—*Rural Californian.*

By the terms of the New York law on black knot, any tree affected is declared a public nuisance and must be destroyed by fire. A board of three commissioners is to be created in any town or city upon application of the freeholders, the commissioners to be fruit growers. Their duties are to institute investigations in the region over which they have jurisdiction and to condemn any affected tree, or part of tree. Anyone failing to comply with their orders to destroy diseased trees, is liable to a fine of $25 or to ten days' imprisonment, or both.

J. H. Hale writes from Connecticut: "The season at the south has been very favorable for nursery stock, but here extreme drouth held all through the early summer. Still by constant cultivation stock has kept growing a little and it has been on the jump since the rains came the last of August. The big storms of early September so thrashed black caps on twelve acres that not many tips can be rooted and stock will be short, but our twenty-five acre block of strawberries must have rooted at least four million plants the last month, and they are still at it."

The *Louisiana* [Mo.] *Press* says: "We give below the monthly pay-roll of Stark nurseries for the nursery year ended June, 1893: June, 1892, $6,695; July, $7,943.35; August, $6,082.15; September, $5,786; October, 9,582.60; November, 7,369.30; December, $5,269.50; January, 1893, $5,201.10; February, $4,445.15; March, $5,790.50; April, $10,394.35; May, $6,584.15; total, $81,145.10. This amount was paid for labor alone and does not include salesmen's salaries or commissions, nor the amounts paid railroads, express companies, merchants, blacksmiths and a hundred other items of expense."

The author of "Sketches on Horseback," says of the Lombardy Poplar: This poplar illustrates a principle in horticulture of much importance. Our original stock came from the valley of the Po river in Italy, where it was supposed to be native. But in 1882 we discovered that its home was in East Europe, and that some of its varieties were as hardy as any of the Russian trees, and far more beautiful than the one from the Po valley. Around Minneapolis and St. Paul, and in parts of North Iowa and Dakota, may be been specimens in perfect health. The Russian variety we introduced from the Agricultural College of Varonesh, in Russia, is quite as upright as our old form, but its top is not so thin, and its foliage is handsomer and darker. In certain situations the Lombardy Poplar is admissible in landscape gardening, and the hardy variety of it will be more plentiful in Iowa fifty years hence than was the old variety twenty-five years ago."

Says the *Iowa State Register:* "We have four queries in regard to the propagation of the cut-leaved birch. This beautiful tree is in demand and our nurseries have never a supply except as ordered from eastern propagators. It is not more difficult to propagate by budding than the cherry or plum. Seedlings of the common European white birch are set in nursery rows one spring and are budded in June of the next season. Of course in June the new buds are not properly developed. Hence the buds are taken from two-year-old wood. Two-year-old buds put in from the 20th to the last of June will not grow under, as in the cherry or plum, and being less excitable, will not start to any extent until the stocks are cut off the next spring. When the buds start, a tendency to drooping can only be prevented by tying to small stakes. When once started upward they make an upward growth. The use of two-year-old buds is now becoming common in propagating the pear at the East. Of late years the spot disease of pear leaves has interfered with August budding. To avoid this, two-year-old buds are set in June, when the leaves are healthy, and the tops are cut off as usual the next spring."

Superintendent Schwagerl of the Park Commission of Seattle, Wash., recently collected choice botanical

specimens in the vicinity of Mount Rainier in Washington for the purpose of exchanging with horticultural gardens abroad. Concerning the United States reservation designated as the Pacific Coast Park Reserve, embracing an area ten miles square about Mount Rainier, the superintendent says: "The natural beauty of this reservation is indeed wonderful. Its numerous streams, cascades, torrents and waterfalls, amid solid walls of rugged rocks, and verdure have no equal anywhere. The symmetrical and charming beauty of the characteristic trees, crowning and dressing the tops of ridges, hills and mounds with their varied undergrowths, constitute unequaled national groves, clusters and groups. Those trees, by reason of their altitude, have made very short annual growths, and thus have become extremely dense and compact in their foliage and twigs, their resinous as also their miniature moss forming upon them making them extremely inflammable. This fact induced some of Tacoma's visiting citizens, as reported by settlers and guides, to set fire to them, merely to enjoy a momentary rocket conflagration, and thus many an invaluable forest gem has been killed and the beautiful park scenery of Paradise valley irreparably marred and injured, while others have ruthlessly cut down live trees for their camp firewood. In a short time, if such vandalism is not peremptorily stopped, one of the, if not the most, beautiful natural parks in the United States, will have been ruined beyond reparation."

TREE FERNS FOR PITTSBURG.

The entire collection of tree ferns now at the World's Fair, the finest collection in the world, has been sold to W. H. Phipps, of Carnegie, Phipps & Co., and by him will be presented to the city of Pittsburg. Mr. Phipps recently gave that city a magnificent conservatory, costing $150,000. He will now fill it with rare and beautiful plants, and will draw heavily upon the Jackson park supply. The price paid for the Australian ferns is in the neighborhood of $10,000. Even at that price they were sold at a sacrifice. Experts pronounce them the finest collection of the kind ever made and one that cannot be duplicated even in Australia. There are seventy-two specimens in the collection. The tallest specimen is several inches over twenty-eight feet in height The group includes bird's-nest ferns, stag's-horn ferns, and the Australian dendrobe, or orchid. All the plants are in excellent condition. Some of them are over 100 years old and bid fair to live several centuries yet.

The conservatory that Mr. Phipps has presented to Pittsburg is the most extensive ever built in this country. It was designed and erected by the Lord & Burnham company, and is located in Schenley park, opposite the Carnegie library. The length of the conservatory is 454 feet, while it covers an area of about 34,000 feet of ground. The glass surface is over 60,000 square feet. Mr. Phipps proposes to stock this conservatory with a collection of plants as rare and unique as can be obtained. After purchasing the Australian ferns he gave an order to purchase at the Fair anything of value that may be at the disposal of the exhibitors.

Among Growers and Dealers.

Vick & Hill, of this city, have purchased ten acres of land of C. H. Banker of Barnard's Crossing, and intend to commence grading ground at once preparatory to the erection of greenhouses, barns, etc.

The Alliance Nursery Company, represented by J. B. Ireland, opened an office in the Ellwanger & Barry building, in this city, recently. The company's packing grounds and nurseries are at West Brighton, N. Y.

Robert Brown, who has had charge of Brown Brothers office at Portland, Ore., has returned to Rochester and is now connected with this office. Mr. Morris, who has had charge of the Chicago office has assumed the duties just left by Mr. Brown, and a gentleman long connected with the Chicago office has taken Mr. Morris' place.

A new company, incorporated by R. M. Ireland, Frank Harvey and F. E. Shopin, called the Elgin (Ill.) Nurseries Company, has been formed with a capital stock of $10,000. It is not likely that these gentlemen will embark in the nursery business, but Mr. Ireland, assignee of the E. H. Ricker Company, thought that it might help the sale of the nurseries (if they are sold) to have a new franchise, as a company buying them might not care to run under the old company name. If the old company should succeed in raising money and getting back the nurseries, then it is likely that the new incorporation would be dissolved.—*Florist's Exchange.*

Frederick L. Ames, vice-president of the Old Colony Railroad Company and well known among horticulturists and nurserymen, by reason of his immense collection of orchids, died of heart disease, in a stateroom on the steamer Pilgrim, at the New York dock in North River, on September 13th. Mr. Ames was the richest man in New England. He was an active director in the Western Union Telegraph Company, the Union Pacific, Chicago & Northwestern and seventy other railroad companies. He headed the list of directors in all the leading trust companies of Boston, was the largest real estate owner in that city and had large real estate interests in Kansas City, Omaha and other places in the West. Mr. Ames was 58 years of age. He had the finest collection of orchids in the United States, at his home at North Easton, Mass., and valuable collections of paintings, china and etchings, at his home in Boston. He was believed to be worth $35,000,000. He leaves five children.

William Seelye Little, died September 1st, at his residence 397 East Avenue, in this city, aged 61 years. The deceased was born at Cherry Valley, this state, and spent his boyhood there. He prepared for college at Poughkeepsie and was graduated from Union College, in the class of '52. He engaged as a civil engineer with the Wabash Railway Company, and in 1858 came to this city to enter the nursery business with the late H. E. Hooker. At the time of Mr. Little's death the firm consisted of himself, his son, Charles

Little and Samuel C. McKown, recently admitted, and was known at the Rochester Commercial Nurseries. The business was located at Culver and Clifford streets. Mr. Little was an elder of the Third Presbyterian church and, as a member of the building committee, had taken an active part in the construction of the new edifice. In 1864 Mr. Little was married to Miss Carolyn Crafts, of Cherry Valley, who, with five children, Julia, Louise, Mary, Carolyn and Charles Little, survives him. He also leaves two brothers, Dr. David Little and Frank W. Little, of this city.

PREPARATION OF TREE ROOTS FOR EXPOSURE TO COLD.

Many years ago we had in Southern Texas an unusual season in the early winter. For forty days we did not see the sun. We had just taken up a lot of peach trees from nursery rows. The refuse seedlings that accrued among the lot were also taken up in the order in which we came to them, and while the nursery trees suited to market were heeled in, the refuse trees were thrown down on the ground promiscuously to be gathered for burning at a convenient time afterward. This remarkable, cloudy, misty, showery and moderately warm weather continued, as stated above, for forty days. I do not think the thermometer got below about 50 degrees during the whole time. We continued packing and shipping every day. We had sometimes left lying over night a few trees that were not heeled in. About Christmas time we had an unusually crowded day. When we came to close up in the evening, there were several considerable piles of trees left without heeling in. These trees had been kept heeled almost from digging time. We had about $2,000 worth of trees in transit for delivery at different points We had no railroads then, and wagon transportation was our only means of freighting. Well, that night there came one of the coldest snaps that we ever got in Southern Texas. The thermometers went down to 20 degrees above zero, for several hours. When we reached our packing grounds in the morning, all we had to do with the trees which we had left unheeled the night before, was to carry them to the brush pile. In a day or two we began to get messages from the wagon loads of trees in transit. In every case they were a total loss. The warm sun had now begun to shine out every day. After about a week we had occasion to go to the refuse seedlings referred to. We were surprised to find that every one of them was in the best possible order. We planted a few as a test, and found that all grew well, and were not at all injured. It then occurred to us that if a lot of trees could be rendered proof against injury from a freeze by such conditions as we had seen these exposed to in a natural way, why could we not subject tree roots to similar conditions by artificial means, and secure similar results.

As a test we then placed some roots in a cellar with shade and sprayed them every day for about a month. We then threw them out into the open air and let them take sunshine, frost and winds for a couple of weeks, during which there was a freeze. At the end of that time they seemed to be in prime order. A couple of them were planted and showed no sign of injury.

I do not know how much value there is in the above history of the facts, but the thought came into my mind that we could thus prepare trees for exposure to either sunshine or frost, and that there might be a commercial value to the facts. In a country like Southern Texas, where trees reasonably packed will stand any exposure required without special preparation, with our vastly improved means of transportation, we do not now need to resort to it. But are there not portions of the United States where a special preparation of the roots of trees to resist cold would diminish the risk of transportation?

Nursery, Texas. G. ONDERDONK.

SCIENTIFIC GARDENING.

It may be that the host of Battersea sub-tropical plants may never be set aside. It may be that in novelty and variety and distinctive congruity, with absence of peculiarity we may never see Gibson's creations excelled; never again see such a distinctive and universal trade demand created for ornamental material.

But to my mind the chief charm of the Battersea work consisted, not so much in the novelty of the material, as in the manner of blending that material with the well-worn occupants of the arboretum and shrubbery.

In this subtle disposition of material Gibson towered head and shoulders above any of his contemporaries, or imitators, or critics, and it was there that his Himalayan travels told their story.

His park was a summer park, its material was chosen to endure the London season, it splendidly fulfilled its every mission, and has endured amazingly—in spite of much of the most childish distortion ever practiced upon gardening material by imitators, who are caricaturists without knowing it.

But there are signs in every direction of a desire for progress. The mere aggregation of material of all kinds, hardy and tender, during the past thirty years begets this. Gardening in this country must be largely for the masses of the people; it should be comprehensive, instructive and distinctively American. It should not be a mere zig-zagery of drives, paths, plant masses and ponds, like Stornberg's Chinese garden without breadth, unity of expression, or grandeur; such a fitting together of detached parts as occurs in a child's puzzle map, and with even less geographical unity as a whole, for nowhere does nature torture her surfaces as do the engineers of American parks—and railroads!

American parks should aim to meet the wants, not of speculative individuals, but of the masses. They should combine all the leading elements of instruction and beauty, and this end should be infinitely more comprehensive in their planting than is commonly the case. The designers, the situation, the latitude and longitude, will stamp them with individuality if they can be redeemed from plagiaristic mannerism of design, and the incubus of the road-maker and shoveller. American forests, beautiful as they are in their outlines at times, and fine as are the units of their composition if suffered to develop, are naturally nearly always a promiscuous and monotonous mixture, each individual doing its utmost in competition to strangle the other; a condition to be carefully avoided in the garden or park. All the striking effects in modern gardening have been due to grouping. The English style achieved its great popularity because it swept away a distorted, prescribed, cultural cramping for the breadth, beauty and simplicity of the pastoral glade and forest group. The very paucity of arboreal material a century ago seemed to have lent the conceptions a distinctive simplicity which endures to this day, and which the English as a people conserve with marked success, while encouraging every variation.

With the vast aggregation of commercial enterprise and commercial plants, a system of distinctive grouping should be employed, avowing the work of the scholar and the gardener, marking the existence of conception in garden and park, and without prejudice to the utmost variety, without sacrifice of unity, or breadth, or beauty, the American recreation ground of the future should be a masterpiece of genius, not a mere road-puzzle in a wood.

JAMES MACPHERSON.

Trenton, N. J.

HORTICULTURE BY LAW.

Some few years ago, the State of Pennsylvania passed a law looking to the thorough eradication of trees suffering from the peach disease known as the "yellows." It was stated at the last meeting of the State Horticultural Association that all attempts to put this law into practice have proved futile. A correspondent of the *Rural New Yorker* states that this has been the result with the New York law against the disease in the plum and cherry, know as "black knot." It is pronounced a dead letter. Almost every effort to carry on agriculture by law has proved a failure. The only hope in these cases is by the universal dissemination of correct knowledge.—*Mechanics' Monthly.*

RECENT PUBLICATIONS.

One of the most interesting of the reports of horticultural societies of the country is that of the Horticultural Society of Missouri, for 1892. It includes the proceeding of the summer meeting at Chillicothe, on June 7th, 8th and 9th, and the winter meeting at Carthage, on December 6th, 7th, 8th and 9th. J. C. Evans, of North Kansas City, is president of the society and L. A Goodman, of Westport, is secretary. Each is a life member of the society. The papers read at the meetings of this society and preserved in the printed reports are of great value to nurserymen and horticulturists.

The transactions of the Massachusetts Horticultural Society, part 1, have been issued by the secretary, Robert Manning. This society was incorporated June 12, 1829, and it is one of the most important in the country. It has 800 members, and it has by far the largest horticultural library in this country. Its library is excelled by few of the kind in Europe. The president of the society is Nathaniel T. Kidder. The value of the printed proceedings is shown by the list of subjects treated, each in a masterly manner: Village Improvement, Landscape Gardening, Hisical Sketch of English Horticulture, The Economics of Horticulture, Combating the Fungous Diseases of Plants, Wild Flowers and Ferns, The Carnation and Its Culture, Poisonous Plants, Aquatic Plants and Their Culture, Tuberous-rooted Begonias, A Visit to Japan. The librarian, Robert Manning, requests nurserymen, seedsmen and florists to send him their catalogues for the files of the library.

Of the numerous excellent books which have appeared lately, for the purpose of popularizing the study of botany, none is more attractive than that recently issued from the press of G. P. Putnam's Sons, of New York, "The Shrubs of Northeastern America," by Charles S. Newhall, author of "The Trees of Northeastern America" and "The Leaf Collector's Hand-Book and Herbarium." The volume is handsomely prepared and copiously illustrated with drawings from nature. The author says: "As I undertook the pleasant work of introduction between the many who have no technical botanical knowledge and my friends the trees, now I do the same for them and my friends the shrubs." The work is conveniently arranged, as follows: List of families and of genera; guide to the shrubs by flower, by leaf, and by fruit; description of shrubs, according to angiosperma and gymnosperma; explanation of terms; glossary; list of shrubs worthy of cultivation; index to the shrubs. There are 116 illustrations. The work should be in the library of every nurseryman. NEW YORK: G. P. Putnam's Sons. ROCHESTER: The Dodge & Brown Co.

"How to Know the Wild Flowers," by Mrs. William Starr Dana, is as attractive as its title indicates it must be. The work is in its fourth edition, and the demand for it is large. To all who have the least fondness for nature, and there are few who have not, this "guide to the names, haunts and habits of our common wild flowers" will be most welcome. It is a book that will always be treasured, not only by the public generally, but by the florist and nurseryman whose business it is to cultivate flowers. The author and the publisher have together produced the most attractive and convenient form. The illustrations are by Marion Satterlee. Ninety-seven of the one hundred and four plates are from original drawings from nature. The most noticeable feature of the work is the grouping of the wild flowers by color. Upon careful consideration this seemed to the author to offer an easier identification than any other arrangement, and those who have used the book speak in high terms of praise of this feature. As far as possible the flowers have been arranged, under their respective colors, according to the seasons' sequence. With the description of each flower is given its common English name, its scientific name and the English title of the larger family to which the plant belongs. The volume contains 298 pages. It is of moderate size, easily carried in the woods and fields. NEW YORK: Charles Scribner's Sons.

The fourth annual report of Hon. J. M. Rusk, as Secretary of Agriculture, has been published. It covers the work of the department in all its branches, during the year 1892, in the usual comprehensive manner.

The Kansas State Board of Agriculture presents interesting facts concerning the state in a World's Fair report.

A valuable document is the catalogue of the exhibit of economic entomology at the World's Columbian Exposition, made under the direction of the entomologist of the United States Department of Agriculture.

No. 5, of Vol. V, of "Insect Life," edited by C. V. Riley, entomologist, and L. O. Howard, first assistant, of the United States Department of Agriculture, has been issued. It is of much value to all who are interested in economic entomology.

Henry W. Kruckeberg, secretary of the Southern California Horticultural Society, has issued the second annual report of the society.

There is little left to be desired in the production of "Our Native Grape" by C. Mitzky & Co., of this city. It is a complete manual of one of the most important industries of the time. The work comprises 220 pages of closely printed matter and represents much patient and accurate labor. The work is neatly arranged and attractively illustrated with lithographic plates, representing the principal varieties that have recently commanded the attention of vineyardists, and with wood engravings which are profusely interspersed throughout the text to the great advantage of the reader. The authors wisely state in the preface that it is the intention of this manual not to make known new theories but to improve upon those already in practice. The chief feature of the book is the descriptive list of grapes. It has been the author's aim to make it the most complete ever published and certainly they have succeeded. All varieties, old and new, are brought to date. Many of these varieties have originated within a year or two. One hundred pages of the book are devoted to this list. It will be seen at a glance that such a manual is invaluable to every nurserymen and horticulturist. But aside from the list there is a large amount of valuable information in the carefully prepared articles upon hybridizing, vineyard planting, soil, pruning and training, diseases, injurious insects, marketing, keeping grapes and wine making. The book is as interesting as it is instructive. ROCHESTER: C. Mitzky & Co.

CATALOGUES RECEIVED.—Thomas Meehan & Sons, Germantown, Phila.: "New Creations in Fruits and Flowers," Luther Burbank, Santa Rosa, Cal.; P. J. Berckmans, Fruitland Nurseries, Augusta, Ga.; Frederick W. Kelsey, New York City; Ellwanger & Barry, Rochester, N. Y.; "A Silent Salesman," A. M. Ramsay & Son, Mahomet, Tex.; Gilbert Onderdonk, Mission Valley Nurseries, Nursery, Texas; P. Vos & Co., Sassenheim, Holland; A. Thienpont & Co., Meirelbeke-Lez-Gand, Belgium; Peter VanVelsen & Sons, Houtvaart, Holland; J. J. Grullemans & Son, Noordwijk, Holland; The Good & Reese Co., Springfield, O.; G. C. Van Meeuwen & Sons, Haarlem, Holland; Kissena Nurseries, Parsons & Sons Co., Ltd., Flushing, N. Y.; The United States Nurseries, Pitcher & Manda, Short Hills, N. J.; William Parry, Pomona Nurseries, N.J.; J. C. Schmidt, Erfurt, Germany; Vick's Floral Guide, James Vick's Sons, Rochester, N. Y.; Wm. S. Little & Sons, Rochester, N. Y.; The Home Nursery Company, Normal, Ill.; Stark Brothers, Louisiana, Mo.; Jacob W. Manning, the Reading Nursery, Reading, Mass.; G. H. & J. H. Hale, "The Elms," South Glastonbury, Conn.; Samuel C. Moon, Morrisville, Pa.; Johnson & Stokes, Philadelphia; John Gardiner & Co., Philadelphia; W. Atlee Burpee & Co., Philadelphia; J. T. Lovett, Co., Little Silver, N. J.; L. L. May & Co., St. Paul, Minn; T. V. Munson, Denison, Tex.; James Mott, Orlando, Fla. L. W. Carr & Co., Lake Shore Nurseries, Erie, Pa.; Levavasseur & Sons, Ussy, France; H. S. Anderson, Cayuga Lake Nurseries, Union Springs, N. Y.; Colombe Brothers, Ussy, France; John Lewis Childs, Floral Park, Queens Co., N. Y.; Bush & Son & Meissner, Bushberg, Mo.; Lenault-Huet. Ussy, France; Pierre Sebire & Sons, Ussy, France; D. S. Lake, Shenandoah Nurseries, Shenandoah, Ia.; Hart Pioneer Nurseries, Fort Scott, Kan.; Edward Parre, Gand, Belgium; W. & T. Smith Co., Geneva, N.Y.; C. Frets, Boskoop, Holland; Kelway & Sons, Langport, Somerset, England; Guiseppe Sada, Milan, Italy; C. S. Curtice Co., Portland, N. Y.; George Achelis, West Chester, Pa.; T. S. Hubbard Co., Fredonia, N. Y.; J. Frank Norris, Brighton, N. Y.; J. Blaauw & Co., Boskoop, Holland; H. E. Hooker Co., Rochester, N. Y.; A. H. Griesa, Lawrence, Kan.; Flemer & Felmly, Roselle, N. J.; William Elliott & Sons, New York City; George S. Josselyn, Fredonia. N. Y.; Farmer Nursery Co., Tadmor, O.; Stephen Hoyt's Sons, New Canaan, Conn.

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DEPARTMENT OF AGRICULTURE RECEIVED DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., NOVEMBER, 1893. NO. 10.

FALL SALES.

Reports from Various Points Regarding the Season's Trade.

SALES IN MANY CASES NEARLY OR QUITE UP TO THE AVERAGE—A FALLING OFF IN SOME INSTANCES—PRICES RULING LOW—A LIGHT SUPPLY AMONG SMALLER GROWERS—LAST SPRING'S PLANTING ABOUT AS USUAL—BRIGHTER PROSPECT FOR NEXT SEASON—SOME FIGURES AND OPINIONS.

Interesting reports from the nursery centers of the country upon the result of the fall sales, the planting of last spring and the outlook for next spring are given below:

DAYTON, O., Oct. 28.—The wholesale trade in the Miami Valley opened up this fall rather sluggishly. Very little early business was transacted for immediate shipment, in consequence of which business became quite brisk during October. Orders were not large but numerous, indicating a light supply in the hands of the smaller growers throughout the country. The business has therefore aggregated very much more than earlier conditions seemed to warrant, and leaves, with the possible exception of apples, a very much smaller general stock on hand for spring trade than in 1892. Dealers have generally been unusually careful in taking orders, wisely preferring a safe to a large business. Country deliveries are reported generally as good, while city and town discounts seem to be somewhat heavier than usual. Prospects for spring indicate a fair trade. If the financial conditions now prevailing should materially improve, the spring trade will undoubtedly be heavy. A shortage in peach and plum now prevails. A very light trade for spring will extend this shortage to cherry, pear and possibly apple. The planting for 1893 seems to have been up to the usual amount with the leading and established firms but a large number of smaller growers have discontinued.

BALTIMORE, Oct. 28.—A member of the Franklin Davis Nursery Company said: "Notwithstanding the 'hard times,' our trade both wholesale and retail has been very nearly as good as usual. It will reach by the end of the season $150,000 but as a rule, orders taken by agents run smaller than last year. We are just in the midst of our fall packing, and to-day over $12,000 worth will be packed and shipped from our siding which runs into the packing grounds. With a force of 200 hands and sheds that enable us to work rain or shine we will soon be through with the heaviest part of the fall work. There seems to be a strong demand for peaches, and from a budding of 750,000 in 1892 we have less than 200,000 to offer. We have gone into Japan pear seedling growing to stay, and this year will put several million on the market. We planted 550,000 apple grafts last spring and 200,000 apple stocks for budding, also 125,000 pear stocks and 50,000 to 75,000 cherry and plum. We make a specialty of growing peaches for the trade; over 900,000 were budded in the summer of 1893. In addition to a general nursery business we collect peach pits in large quantities for the trade. Many carloads have been sold this season. We are advised that other nurserymen in the state have budded large numbers of peaches."

MONROE, Mich., Oct. 28.—This point continues the center of active operations. During the fall trade just closed the usual number of dealers and agents have registered at our hotels, figured on the billing grounds, smoked the cigars of our genial nurserymen, told the yarns of their craft, exchanged their good money for good stock and have gone away as good humored as they came. Each wanted to be first to pack and go, and with an ingenuity known only to nurserymen they were all accommodated. They all went away first and our quiet town is now as peaceful as a May-day dream. Our nurserymen have vigorously carried on their own retail work and report their sales as high as their usual standard. The strained money market and the low price of farm produce were difficulties in the way, but the stability of our banks and their own financial strength overcame the first, while the last was met with more determined work. The veteran firm of I. E. Ilgenfritz & Son is still doing business at the old stand and is as popular as ever. They have recently put up a large stone cold storage cellar which bespeaks the measure of their increasing trade. Greening Brothers have more than sustained the reputation they have earned. These Napoleons of the nursery business continue their conquering way and are striding forward like an ogre in seven league-boots. When hard times came and the agency system was depressed they increased their office force and are now doing a high class planters' business through the mails. Every new issue of the commercial books gives them a higher rating, and the large number of new residences, offices and cellars erected during the past year shows that their business flourishes like the rose. As to the proportion of stock planted as compared with other years there is no marked difference except in pears. Monroe nurserymen have discovered that they can grow the finest pears in the world and at lowest cost. The firm

of Greening Brothers alone will set out next spring 200,000 French stocks. And so the good work goes on.

AUGUSTA, GA., Oct. 26.—P. J. Berckmans, when asked concerning the fall trade and outlook for spring, said: "Referring to our order book we are safe in saying that the demand for nursery stock will be fully 25 per cent. larger than last year at this time. The main demand is as follows: Peaches, mainly varieties suitable for shipping to northern and western markets. Pear trees, greatest demand is for Kieffer and LeConte. Apple trees, largely winter-ripening kinds. Plums, heavy demand for Japanese varieties. In grapes the demand is unusually large, principally for Concord, Ives, Delaware, Niagara, Brighton and Moore's Diamond. Small fruits are in heavy demand. In the ornamental line the demand for open-ground roses is fully double that of last year; these are largely ordered by the northern and western dealers. We also find a very large increase in the sale of Camellias, Azaleas and other hardy broad-leaved evergreens. Conifers, principally of the Asiatic and sub-tropical classes meet with increased sales. The demand for palms is unusually large, and in order to supply our orders we have just erected two palm houses 140 x 20 feet each; this, in addition to our former area of glass, allows us to carry an immense stock. We have now 300 acres closely planted in nursery stock, 25 acres of which consist of roses. From correspondence with various southern nurserymen and the size of our orders we feel safe in saying that the demand for all classes of nursery stock is vastly on the increase. The shipping season here lasts without intermission from October 15th to early spring, hence we have not what you may call a spring trade, except in greenhouse and budding plants. The demand for these products is also much larger than that of last year."

BLOOMINGTON, ILL., Oct. 25.—William E. Rossney said: "The trade in this locality this season, from what I can learn, is unusually light, and with some nurserymen, I understand their trade is lighter than they anticipated earlier in the season. On the whole, it is much lighter than for a great many years. The prospects for spring business, from present indications, are not very favorable. Very few applications for agencies are coming in, and applications from dealers who wish to contract for next season's packing are few. The planting in this locality last spring was about as usual, but the continued dry weather during the summer months cut it short some, but the stand on the entire planting here will probably average up with other seasons."

FORT SCOTT, KAN., Oct 27.—Secretary U. B. Pearsall, of the Hart Pioneer Nurseries, said to-day: "Our trade is substantially the same, if not a little larger than last year. It is too soon, however, to know how collections will be, as we are just shipping out. Growth of nursery stock trans-Mississippi varies widely, by reason of the rains being local instead of general. We think, however, that the general average is fully better than in 1892. In our case, all of last spring's planting is much better. The general demand for nursery stock is about the same as last year, and if trade keeps on at about the same ratio, there will probably be but little surplus stock left. Prices, however, are generally lower than heretofore. We are in the midst of our packing."

TADMOR, O, Oct. 25.—Situated on the D. & M. R. R., ten miles north of Dayton, O., is the little station of Tadmor, unpretentious in itself, but doing more mail and freight service than most towns having 5,000 to 10,000 inhabitants. This is owing to the great nursery interests, of which it is the center, as within a radius of ten miles a score of nurseries are located. Going east one mile one sees the sign, A. & O. Co. This is one of the largest establishments in the valley, their sales are mostly made by salesmen on a salary, and for fall, '93, are some larger than the previous fall. Their specialty is peach, with "Diamond" (copyrighted) a leader. Their plantings recently have been done mostly through Porter Albaugh, James White and Byron Weldy, growers, of West Charleston, and several others between Vandalia and Dayton. For spring, '93, it was about the average, excepting with peach, of which they did not obtain a good burst; in round numbers, 400,000 peach, 200,000 apple, 100,000 cherry, 50,000 Marianna plum and some Norway maple. Not only do they handle all of this stock, but may carloads of other trees are required to run their rapidly increasing trade. A mile farther east is the office of The Farmers Nursery Co. This company comprises the old and well-known firms of Mrs. A. D. Freeman & Son and S. R. Fergus. They are coming to the front as growers and introducers of the most valuable and best-selling fruits of the present time, and were among the first to recognize THE NATIONAL NURSERYMAN as the best advertising medium for the trade. They advocate the planting of fewer and better varieties, and recommend only such as have been endorsed by the experimental stations and the leading horticulturists of the country. Their combined planting for last spring was in neighborhood of 75,000 peach, 50,000 cherry, 40,000 plum and an acre or so to small fruits and ornamentals. Their main trade is on peach and strawberry, of which the Crosby and Greenville are their chief varieties. Their retail trade for fall, '93, was not up to the average, but this was, no doubt, due to their putting more attention to their wholesale trade, which is double that of any previous season. Peter Bohlender is proprietor of "Spring Hill Nurseries" Mr. Bohlender has the lead in this vicinity as a grower of ornamentals. He supplies prominent nurserymen and dealers, his trade being mostly wholesale to nurserymen and dealers. He reports sales as about the same as last fall and outlook for spring trade better than last year at this time. His planting for the spring of '93 consisted mostly of 60,000 peach, 5,000 plum (half each

of Marianna and Myrobolan), 30,000 cherry, 20,000 apple and several acres additional devoted to evergreens and ornamental shrubbery. No nurserymen ever come to our valley but carry away with them a pleasant remembrance of their visit at his home. The most prominent growers of berry plants are Wm. Deetrick and H. W. Freeman, of Tadmor; Joseph Davis, of Brandt; and W. N. Scarff, of New Carlisle. At this writing the last named parties are doing the larger business. Mr. Deetrick is intending to increase his plant, and H. W. Freeman, whose specialty is strawberries, is intending to plant about five acres to them for plant purposes, over half of which will be of the "Greenville." This point is prominent in growing peach and berries. Owing to poor burst of pits last season the plant of peach was far below the average. A conservative estimate would place the aggregate of the retail trade at $125,000 for fall. This is about the usual amount for fall The general trend at Tadmor indicates that apple will not be planted in large quantities in the future and that additional ground will be devoted to peach and berries.

KINSEY, O., Oct. 25.—Trade has not thus far been as good as last fall. The falling off has been on nearly all lines of stock. Amount of sales will scarcely reach $15,000 here and vicinity. The planting last spring was about as large as usual, except, possibly, on apples, in which case there was a slight falling off. An estimate is: 150,000 apple; 75,000 cherry; 100,000 peach; 25,000 plum; 20,000 quince; 10,000 shade and ornamental trees; 10,000 evergreens; 5,000 to 10,000 shrubs; 150,000 asparagus; 50,000 strawberry plants, mostly for fruiting; 35,000 currants, cuttings and gooseberries; 75,000 grape cuttings; besides roses, climbing plants and many other items. The apple, peach and cherry above mentioned include several small plantings in and about Little York. The other items are all at Kinsey.

DES MOINES, IA., Oct. 25.—Fall sales have been cut short from one-third to one-half, but spring sales promise much better. The amount of planting last spring was about as usual and stock has made good growth.

BATAVIA, N. Y., Oct. 24.—Nelson Bogue said to-day: "Our sales were as heavy as last fall, if not heavier. In September they fell off somewhat. Our retail trade for spring is much larger than it was last year at this time. I think importations will be much lighter than usual and not nearly as much stock will be planted next spring as has been the rule. This will strengthen wholesale prices for the spring trade."

GENEVA, N. Y, Oct. 24.—A prominent grower of this place said to-day: "Trade in a wholesale way is less in amount both in prices and quantity of stock handled than last season. We have had some large orders from sources from which we did not expect a call, for particular lines of stock. We find orchardists disposed to plant about as usual, but there is a falling off in the trade of small dealers—the trade pushed up by them of a multitude of little orders is not as large now as a year ago. This is particularly the case in manufacturing towns where people are out of work that have been employed by the producers, who have shut down fearing tariff tinkering by the party in power. Democrats are scarce this year among this class of dealers. Retailers who secure most of their orders before August 1st had increased business up to that time, as compared with the preceding year. Many kinds of stock are running low—some scarce and some not to be had. Our ornamental trade has been very satisfactory, indeed. As to plantings here, prices that 'outside growers' get will mostly discourage them, but those who can afford it will plant the usual quantity. All look for a reaction, and if the quantity and quality in sight for future digging, fall of '94 and '95, are considered, the advance in prices will come, possibly sooner than we expect."

TORONTO, Oct. 31.—Stone & Wellington said to-day: "The outlook seems good for next spring and from present indications our sales will exceed anything in the history of our firm. We have done considerable wholesaling also; sent considerable stock to the United States. Owing to the dry weather, nursery stock of some kinds did not do as well as hoped for, but taking it generally, we never had a finer stock. Probably peach trees were affected most of all. Most of last spring's planting, with us, was very successful, having been planted on land that was not affected by the drought. Stock is ripening up well and should come through the winter in good shape and that being the case we shall have an enormous out-put from our nursery next season, and the finest stock we ever grew."

Local nurserymen report as follows:

ELLWANGER & BARRY—"Our sales have been about the same as last fall. We are busy shipping and shall be until Christmas."

IRVING ROUSE—"Fall trade has been good, but prices rule very low, lower than the supply warrants. Standard pears were never so cheap, yet if sales are normal through the winter, No. 1 standard pears will be actually scarce and we anticipate better prices. Personally I have not sold so clean in five years."

WILLIAM S. LITTLE & CO.—"Our sales this fall were unsatisfactory both as to prices and quantity of stock sold. Think the outlook for spring is better. Last spring we made our usual planting, neither more nor less, but the stand, owing to early rains and late dry weather was poor. Next spring we expect to plant about the same amount as last spring."

JAMES F. LECLARE, BRIGHTON, N. Y.—"Retail sales compare favorably with those of year, the amount this

fall being about 25 per cent. larger than in the fall of 1892. Prices about the same. This increase, however, is due to better organization rather than any general improvement in trade. How collections will be in these times of general depression remains to be seem; however, the few returns received at this date are fully up to the average, and give no indication of cause for alarm in that respect. The demand for stock at wholesale has been very light this season and prices low. Prospects for retail sales for spring are good, providing there is no further depression, and fall collections are such as to warrant pushing spring business. My planting last spring was about my usual amount, 200,000 stocks, of which 40,000 were apple, 25,000 pear, 25,000 plum, 15,000 cherry, 15,000 quince, balance made up of peach, rose, ornamental, gooseberry, currant, &c."

NEW YORK'S HORTICULTURAL EXHIBIT.

A press despatch from Chicago says: "The horticultural exhibit for New York at the World's Fair in extent of variety and fine quality is acknowledged to lead all other states. Monroe county has contributed very valuable exhibits. Messrs. Ellwanger & Barry who have been liberal contributors, displayed in one day 130 varieties of pears, besides 100 varieties of grapes and a fine exhibit of quinces. Over sixty varieties of grapes were received from Chautauqua county the same day, and a fine display of apples, pears and quinces from the Orleans County Agricultural Society was shown at the Fair. The Californian exhibitors came around and with great surprise declared that New York was now unloading and it was of no use to try to show varieties against her longer. The finest twenty-ounce apples from any portion of the United States are shown by J. B. Collamer & Son of North Parma, Monroe County. They are not only as large in size as those shown by Idaho, Colorado and Oregon, grown by irrigation, but are more uniform in size, and far superior in beautiful color and in fine flavor. The season has been the most disastrous to the interests of horticulture in New York State in twenty years. The apple crop of Western New York has been a very general failure, the best fruit coming from the eastern portion of the state this year."

The annual meeting of the American Seedsmen's Protective league was held at the Rochester Club house last month. There were present: W. Atlee Burpee, Willam Henry Maule, Henry Dreer, Robert Buist, Landreth & Sons, all of Philadelphia; Alexander Forbes, of Peter Henderson & Co., New York; James Bergerhoff, of James Thorburn Co., New York; N. B. Keeney, of Le Roy; C. W. and George F. Crosman, of Crosman Bros., and James and Charles H. Vick, of James Vick's Sons, of this city.

Among Growers and Dealers.

Irving Rouse has gone to France upon his annual visit in the interest of importations for next spring.

J. N. Holton, general western manager for the Le-Clare Nursery of Brighton, N. Y., started for the Pacific coast on October 15th.

The barns of Irving Rouse valued at $6,000, were destroyed by fire on October 22d; also ten horses valued at $200 each. There was partial insurance.

William Vick who was for many years engaged with his brother James Vick in the seed business, narrowly escaped instant death while crossing an electric railway track before a car on October 26th. He was thrown some distance from the track and was severely bruised. Mr. Vick has the use of but one ear and one eye.

Testimony in an action brought by the Union Bank of this city against May Brothers, was taken last week before John E. Durand as commissioner. About $10,000 in judgments is involved and the depositions are to be used in the trial of the case which is to take place at St. Paul, Minn., where the main office of the company is located. In 1887 Lewis L. May, who was then engaged in the nursery business at St. Paul, came to Rochester for the purpose of establishing a branch office of which Frederick N. May, a younger brother, was to be the head. Mr. May brought excellent letters of introduction and proof of his financial standing and he found no difficulty in securing a line of credit. He placed several thousand dollars on deposit in the Union Bank as a commencement of the firm's banking business in this city. The company did a good business for several years, but last spring F. N. May made a transfer of the bulk of his accounts and his equity in certain real estate in the city to Mrs. M. E. Stone, his landlady. The entire property was worth $30,000, and this action promptly brought a swarm of creditors about the office. The Union Bank's claim amounted to nearly $10,000. Judgments were secured and the papers in the action were served upon F. N. May as the local representative of May Brothers. L. L. May promptly came forward with a denial that he was a member of the company, and in order to make him a defendant in the case the present action was begun in the Minnesota court. The defendant's claim, if proved, will render it very difficult for the Union Bank to recover.

FULL OF BEST ADVICE TO ALL.

DR. H. SCHROEDER, BLOOMINGTON, ILL,, OLDEST NURSERYMAN, HORTICULTURIST AND VITICULTURIST IN THE WEST.—"Here is my dollar for subscription for one year. Certainly every nurseryman should take pride in keeping up such a valuable and fine journal, full of best reports and advice to young and old nurserymen. One feels himself in a picked social society of old and dear friends of the fraternity. 'Keep it up, boys,' is my password."

S. D. WILLARD.

One of the best known nurserymen and horticulturists in the country is S. D. Willard, of Geneva, N. Y. He was born and brought up on a farm on the banks of Cayuga Lake in this state, where fruit growing has ever been regarded as an important interest, and with such surroundings a taste for horticulture was developed at an early age, which in more mature years led him to engage in the nursery business at Geneva, and with it the growing of fruit for commercial purposes.

The success with which the plum was being grown, twenty-five years since in the country adjacent to the Hudson River attracted the attention of Mr. Willard, and induced him to make this a leading feature in his orchard work, being confident that climate and soil favored the growing of the fruit at Geneva ; nor was he mistaken in this. The annual shipments of this fruit now at this point exceed that of any one point in the state.

Mr. Willard has imported many new varieties for the purpose of testing their value as orchard sorts, and he is now fruiting about fifty varieties, many of which he finds of no practical value to the orchardist, but the experience thus obtained he regards of great value to him in the work in which he is engaged.

He believes the nurseryman should also be the grower of fruits, and that the commercial orchardist should not pin his faith too strongly upon the production of any one of the many fruits that can be grown so successfully in Western New York. Hence he grows more or less of cherries, quinces, peaches and pears, as well as some of the smaller fruits ; indeed he says anything that can be grown with profit. He was the first to plant the Kieffer pear as an orchard tree in New York state, and has ever been a strong advocate in favor of this variety as a profitable orchard fruit. His faith is shown by his works, as he continues to plant largely of the variety, and has recently shipped a car load of the fruit to Chicago to parties who have been handling it there for him for several years. He is a believer in thorough light drainage and regards it unwise for any one to plant orchards on land which is not naturally or artificially well drained.

As he is now approaching sixty years of age, with no boys to take up his work, he feels that he must contract his efforts for the future, but declares that were he thirty years younger his future planting would be measured only by his means, and that if possible, he would be the owner of the largest fruit orchards in America, so great is his confidence in the future of this industry.

Mr. Willard is no theorist, but thoroughly practical and knows well the nature and habits of every tree of which he is the owner. For years he has been one of the most active members of the Western New York



S. D. WILLARD.

Horticultural Society, of which he is vice-president. He is a member of the executive board of the State Agricultural Society, the horticultural department of which, under his management, has grown to be the finest in its exhibit of any state in the Union.

ANEMONE JAPONICA ALBA FLORA PLENO.

(Honorine Jobert.)

The frontispiece of this issue presents a plant of the above named variety which originated on the grounds of George Moulson & Son, "The Union Nurseries," in this city in the spring of 1888. It bloomed for the first time in 1889. It is a cross of the dwarf semi-double pink flowering Anemone and the standard single white Anemone. It is a double-flowering variety of great beauty. It has the very free-blooming characteristic of the pink with the tall-growing habit and large, heavy, dense foliage of the single white variety. It is much hardier than either of its parents. A bed 6 feet wide and 30 feet long situated in an exposed place was not covered during the past two winters, yet not a plant was lost, and the plants are as vigorous and full of bloom this fall as those covered during the past winters. The plants grow quite evenly in height from 2 to 2½ feet, and the flowers measure trom 2½ to 3 inches in diameter. Plants will be sold next spring for the first time. The buds of the new variety are similar to the pink Anemone.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
305 COX BUILDING, ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months.....50
Foreign Subscriptions.....1.25
Six Months.....75

Advertising rates will be sent upon application. Advertisements should reach this office by the 20th of the month previous to the date of issue.

Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., NOVEMBER, 1893.

THE STATE OF TRADE.

Reports from the nursery centers of the country indicate that notwithstanding the financial depression, there has been considerable nursery business done this fall, and the results are much more encouraging than was anticipated. It is possible that the financial stringency of the summer and fall may prove a great benefit to the nursery business. Certain it is that there has been a marked tendency in the direction of conservative operation, dealers generally being careful in taking orders, preferring a safe to a large business. There has been a steady demand for stock, however, in many places. Growers report that orders were not large, but numerous, showing that there was a light supply in the hands of the smaller growers throughout the country. The large growers planted about the usual amount last spring, while many of the smaller growers discontinued. The prospect for spring, therefore, is that there will be a fair trade anyway, and that if there is an improvement in the financial conditions, the spring trade may be heavy. There is a shortage in peach and plum, and this may be extended to cherry, pear and even apple.

REMEDY FOR EXISTING EVILS.

"Coming events cast their shadows before," and perhaps the present condition of the nursery business may teach that the remedy for existing evils would be to grow less stock and better. The nurseryman would be benefited because he would get a better price, there would be less stock in the market, the grower who raises only a few trees would not be able to force down the price of good stock because his would not be of the necessary grade, and the dealer could well afford to pay an increased price because he would more than save it in the discounts that are forced upon him when delivering, and the increase of trade which he would obtain by handling the best stock only.

The business would be benefited as a whole, for the reason that the public would obtain so much better results, both with fruits and flowers, and thus in every section would be created an increased demand for stock. The greater success the people have with trees and plants, the more will they buy. One of the chief objects of the business is to induce people to build up attractive surroundings to their homes, and the more shapely the trees and plants that are used for this purpose, the greater the satisfaction, and the more rapid will be the increase of the desire and taste for the beautiful in nature.

An acquisition of great importance to the list of late fall pears is the Dempsey, recently introduced by Stone & Wellington of Toronto. The sample received at this office measured nine inches in circumference. In shape it was somewhat like the Buerre d'Anjou and in flavor somewhat like the Duchess. It was of a more golden yellow color, when fully ripe, than either of those named. It was of much finer grain than the Duchess. Large, juicy, golden and of a superior flavor, the Dempsey well illustrates what high cultivation and a judicious study of the results of crossing varieties will produce. The control of the Dempsey was purchased from the late Wm. Dempsey by the proprietors of the Fonthill Nurseries in Toronto. The new pear was produced from the seed of the Bartlett fertilized with Duchess d'Anjouleme.

A subject of much importance to nurserymen was discussed by Edwin Willitts of the U. S. Department of Agriculture, at the Horticultural Congress at the World's Fair. It was the subject of federal legislation with a view of preventing the spread of disease and insects affecting trees and shrubs. Abstracts from the paper read by Mr. Willitts are presented in this issue of The National Nurseryman. The subject is uppermost in the minds of many who have to do with the interests of horticulturists and nurserymen and it is probable, as Mr. Willitts suggests, that the Caminetti bill or one of like character may be presented at the present congress. There is need for watching all developments and preserving the interests of nurserymen in general as against the operations of the few.

Bishop Reynolds Hole, of England, will visit this country within a few months. He is spoken of as the father of the Rose Society of England and it has been stated that he is one of the best authorities in the world on the rose. The New York Florists' Club will give him a reception upon his arrival.

And now the Rhode Island Horticultural Society gives up the struggle and suggests that a national convention of horticultural societies be called to settle the question of a national flower.

THE WORLD'S HORTICULTURAL SOCIETY.

The following greeting has been issued to the horticulturists of the world :

"Immediately following the World's Congress on Horticulture at Chicago in August last, a series of meetings was held to consider the advisability of organizing a horticultural society which shall include every country of the globe. After much discussion, in which many eminent men from various parts of the world engaged, the World's Horticultural Society was organized and the election of the three general officers was held, on the 25th of August. This new society is designed, in the language of the constitution, 'to promote correspondence and to facilitate exchange of plants and information between the countries of the world.' This society can co-ordinate and extend the work of all existing societies, compile statistics, promote legislation and education, prepare correspondence directories, diffuse all the latest information from the various parts of the globe, consider means of transportation, and facilitate the exchange of varieties and every commodity in which pomologists, viticulturists, florists, vegetable gardeners, and other horticulturists are interested. The Society will probably meet occasionally at the various International Exhibitions, upon which occasions, also, it can greatly aid in procuring exhibits from all parts of the world.

"The general charge of this great Society resides in three officers : The President ; Vice-President at large ; Secretary-Treasurer at large. There is to be a Vice-President and Secretary-Treasurer for each country, who shall direct the affairs of the Society in their respective countries. The officers elected at Chicago upon the 25th of August, 1893, were : Prosper J. Berckmans, A. M., Augusta, Georgia, U. S. A., President, a native of Belgium, but for many years a prominent pomologist and nurseryman of the United States, where he is now president of the American Pomological Society ; Henri L. de Vilmorin, Paris, France, Vice-President, a distinguished horticulturist, scientist and author, who is favorably known throughout the world ; George Nicholson, Secretary-Treasurer, Curator of the Royal Gardens, Kew, England, everywhere known as the author of the incomparable Illustrated Dictionary of Gardening. Later, the President appointed William F. Dreer, of Philadelphia, Vice-President for the United States, a man long and favorably known in the seed trade ; and Mr. Dreer appointed Professor L. H. Bailey, Cornell University, Ithaca, N. Y., Secretary-Treasurer for the United States. At this juncture Mr. Nicholson declined the office of Secretary-Treasurer at large, as it would be inconsistent with his present duties. This is a source of deep regret to his many friends and admirers. Until a successor is elected, the Secretary-Treasurer for the United States has consented to act in the capacity of general Secretary-Treasurer.

"The Society now requests the earnest and early support of its friends. The Vice-Presidents of the various countries will be announced soon, and the organization will then be quickly completed. The Society needs the co-operation of every enlightened horticulturist and every important horticultural organization.

PROSPER J. BERCKMANS, President,
Augusta, Georgia, U. S. A.
HENRI L. DE VILMORIN, Vice-President,
No. 22 Avenue de la Bourbonnais, Paris, France.
L. H. BAILEY,
Ithaca, N. Y., U. S. A.
Secretary-Treasurer for the United States, and
temporary Secretary-Treasurer at large."

The initial membership fee for North America is $2.00, which also covers the dues for the remainder of the current year. Thereafter, the dues are $1.00 a year. Every American horticulturist should identify himself with this organization ; and every state or district society should do the same. Remittances from the United States should be sent to the Secretary at Ithaca, N. Y.

CONSTITUTION.

Following is the constitution of the World's Horticultural Society:

This body shall be known as the World's Horticultural Society.

The object of this Society shall be to promote correspondence and to facilitate exchange of plants and information between the countries of the world.

The membership of this Society shall be composed of societies in the various countries and of individuals, who shall subscribe to its constitution and pay the membership fees.

The officers of this Society shall consist of a President, First Vice-President, and a Secretary-Treasurer ; also a Vice-President and a Secretary-Treasurer in each country, independent state or province, whenever suitable persons can be found who are willing to undertake the duties of such office. The officers shall constitute an Executive Committee, which may call meetings on such occasions of interest as may be deemed worthy.

The term of office of all officers of this Society shall be three years, and until their successors are duly elected and qualified.

The Vice-President in each country shall be appointed at the outset, by the President of the World's Horticultural Society, after conference with the foreign representatives at the World's Columbian Exposition, or upon correspondence with horticulturists in the various countries.

The Vice-President of each country shall appoint the Secretary-Treasurer for that country.

The fee for societies shall be $5.00 annually, or as near that amount as the currency of the country readily admits. The initial fee for individuals shall be $2.00, or approximately that amount, which fee shall also be the dues for the remainder of the current calendar year. The annual dues thereafter shall be one-half that sum.

The funds shall be spent by the Executive Committee

for the necessary expenses of the Society, which shall allow one-third of all the collections in each country to be retained there for its own expenses, and to be disbursed by its own Secretary, except in the country represented by the President, where all funds collected shall be retained, but that country shall pay its share of the general expenses. The Executive Committee has power to publish a periodical of the size and frequency of issue warranted by the funds, and which shall be sent free to all members of the Society. In the absence of meetings of the Executive Committee, the President, First Vice-President, Secretary-Treasurer, and the Secretary-Treasurer of the country represented by the President, shall constitute a Finance Committee, which shall audit the accounts of the Society, any two of whom shall constitute a quorum.

The President, First Vice-President, Secretary-Treasurer, and Secretary-Treasurer of the country represented by the President, constitute the Committee on By-Laws of the World's Horticultural Society, any two of whom shall constitute a quorum.

This was adopted by a meeting of horticulturists of various countries, in Chicago, August 25, 1893.

FALL PLANTING.

Every postoffice in the state is now flooded with advice to plant in the fall. A Rochester tract of this kind headed "Planting Time, a Reminder," says:

For a long time the idea was prevalent that fall planting was not advantageous. Experience has proven that this opinion is erroneous. The spring planting season in most localities is so short that intending planters do not have time to properly consider and put into execution the plans which have been made, and the result is that every spring much important work is necessarily left undone. In the autumn the soil is in even better condition for planting than in the spring, and the season being much longer, all who contemplate planting have a much more favorable opportunity to consider and mature plans, and to carry them out.

The tree peddlers who are making fall deliveries in Iowa show these statements to all purchasers and urge immediate planting when the trees are delivered. In the prairie states fall planting of fruit trees is rarely satisfactory. As a rule the trees are dry enough to burn when the season for growth comes on. If not dry they will be so lowered in vitality as to make feeble growth. The time to plant trees in Iowa is when the season for growth arrives. Even early spring planting is not advisable.—*Iowa State Register.*

The third annual meeting of the Horticultural Society of Marion County, Ill., will be held in Kinmundy on November 14th. J. G. Vaughan is president and E. G. Mendenhall secretary. Papers will be read by A. T. Anglen, of Kinmundy, on "Tomato Culture"; W. S. Ross of Alma on "Some Reasons for Loss of Fruit Crops During Last Two Years," and J. Webster, of Centralia on "Apple Orcharding."

THE CAMINETTI BILL

And the Arguments Which Led to Its Introduction in Congress.

INTERSTATE LAWS TO CONTROL INSECTS AND DISEASES DISCUSSED BY EDWIN WILLITTS OF THE DEPARTMENT OF AGRICULTURE—FEDERAL AND STATE CO-OPERATION—THE CALIFORNIA CONGRESSMAN'S BILL TOO DRASTIC—PROPOSED REMEDIAL LEGISLATION SUPPORTED BY PUBLIC SENTIMENT AND INDIVIDUAL MORAL COURAGE.

The subject of "Interstate Laws to Control Insects and Diseases" was presented at the Horticultural Congress at the World's Fair, in a paper prepared by Edwin Willetts of the U. S. Department of Agriculture. He called attention to the difficulty in preventing by state laws the spread of disease and insects which attack trees and shrubs.

"The apple," said he, "has at its core the larvæ of the codling moth. The apple you *must* have, you *will* have, and no law has been able to prevent your having it, and the only remedy seems to be to kill the codling moth before it has invaded the apple to be brought in. Who shall kill the codling moth? Who shall destroy the contagious blight? Nothing but comity and mutual self-interest can be exercised between states. But comity is paralyzed by self-interest and mutual interest counts for nothing in the face of hostile neglect or supreme indifference. Men will import and export plague-smitten rags and all manner of contagion and all varieties of pests, and the question of the hour is, how shall this importation and exportation be controlled by law? It is a simple problem for a single community that has autonomy sufficient unto itself. But what shall be done with forty-four communities irresistibly determined to have intercourse; traversed by railroads which run from sea to sea; by rivers that run from the mountain to the ocean; by winds that sweep the horizon? It is manifest that neither local lines nor state regulation can control this subject and we must look to that jurisdiction, which, in a certain limited sense, at least represents the whole."

Mr. Willitts proceeded to consider what federal legislation can accomplish. He said:

It is conceded on all sides that there are individual rights and state rights; that as a rule the individual rights are subject to and are protected in the main by the powers of the state. A contagious disease strikes an orchard. Without question, the best remedy is the most drastic. The orchard should be wiped out—dug up root and branch, and burned to ashes. But what jurisdiction shall exercise this tremendous power, the taking and destroying of private property for the public good? In the first place, who shall decide that the disease is a contagious disease? Who shall condemn the property to destruction? Who shall abate this nuisance? The generally acceded construction of the Constitution has placed this power in the state alone, and the instances are rare in which the power above indicated has been exercised by the federal government. The most direct attempt in that direction, as I now recollect, was in the power conferred upon the Department of Agriculture, through the bureau of animal industry, to eradicate pleuro-pneumonia and other contagious diseases. Just what the full powers were, is not clear. Appropriations have been made for investigation of peach yellows, pear blight, and various

forms of vegetable diseases, and for an investigation into the habits, life, and best methods of eradicating insect pests; but in all these cases congress has never gone beyond the line of general investigation, experiment, and publication of the results for general information. The state of Michigan passed a law authorizing, under certain rules and regulations, the destruction of all trees affected by the peach yellows, and the operation of this law was highly successful. But congress has never given the power to any federal agency to enter upon a man's field and destroy his products in order to abate either contagious vegetable diseases or insect pests, and I do not believe that congress will ever confer any such power under this clause of the constitution or any other, and I submit that it is idle for us to look for legislation in that direction.

THE INTERSTATE COMMERCE CLAUSE.

The interstate commerce clause presents some hope, though it also encounters many difficulties. Congress has unquestioned power to regulate commerce among the states, and the source of most of our difficulties lies in the fact that these diseases and pests are generally transmitted by commerce. If the disease or insect should be quarantined in its habitat, ninety-nine-hundredths of the harm from disease and insect would be avoided. In the regulation of this commerce I believe it has a right to say that there shall be no commodity transported from one state to another afflicted with a contagious disease or a pestiferous insect; and to prevent this it has the power to appoint agents to execute these laws and to provide penalties for their violation. But you will understand that this power only relates to commodities to be transported from state to state. Under this brief statement of the facts it is manifest that a large proportion of the remedial efforts must be assumed and carried out by the state, the United States government being asked to co-operate only in the effort to prevent the spread from state to state. The whole legislation on the subject should be carried on *pari passu* by the states and congress, the states assuming the right and power of extermination and the United States, through congress, assuming the right and power of preventing transmission from state to state, with public sentiment back of all to enforce the laws enacted by both jurisdictions; at the same time a liberal line of appropriations by both jurisdictions should be made to investigate, experiment and inform the people as to the character and destructiveness of the disease or insect and as to the best method of their eradication.

One question intervenes in this discussion that is not without its difficulties. Who shall decide that the young nursery stock is or is not stricken with the disease or has or has not within it the incipient germ which, under proper conditions, will develop the disease? A state, for instance, passes laws absolutely prohibiting the importation within its borders of any such afflicted nursery stock. I think it has the power to prohibit such importation. Assume that the nurseryman makes a sale in another state of stock which he claims is absolutely free from infection. The state authorities insist that the stock came from an infected district and that the chances are that the young trees are likely to be also infected, and prohibit their importation on the same principle that the states have established quarantine lines, across which no animal during certain periods shall be brought from an infected district. Who shall, as I say again, decide whether this stock is truly a subject for the adverse operation of the state law? This was a practical question raised in the department within the last year. An owner of large peach nurseries in a certain state made large contracts in California for the delivery of his stock, and simply because the peach trees came from an infected district he was forbidden by the California authorities to deliver the stock in said state. He appealed to the Department of Agriculture to examine and report upon the fact whether his trees were infected, and then demanded, in case we should report they were not, that our certificate of the healthfulness of the trees should overrule the state prohibition. I had hard work to convince him—in fact, I do not believe I did convince him—that the Department of Agriculture had no such power. I was willing in his specific case to examine and report, providing he would secure from the state authorities their consent to accept our certificate as final. I do not know whether anything further came of the matter as at this point our correspondence ceased. Another element entered into my reasons for declining to examine his nursery, and that was the fact that on the principle sought to be established we were likely to be called upon from first to last to make an examination of all the nurseries in the land, for which expense we had neither funds nor force. The inspection and examination on this basis would soon become so huge as to break down of its own weight.

LEGISLATION WHICH HAS BEEN PROPOSED.

Before concluding this paper it may be proper to put on record and attach thereto, as an exhibit for consideration and discussion, a bill presented in the last congress by Mr. Caminetti, representative in congress from the state of California. It is entitled 52d congress, 1st session, H. R. 3876: "A bill to prohibit the interstate transportation of trees, plants, vines or other nursery stock infected with scale insects, or codling moths, or other pests, or with their eggs, or larvæ, or infected with any diseases injurious to trees, plants, and vines, and the importation into the United States from any foreign country, of any thereof so affected; to provide for penalties for violation thereof, and defining the duties of certain departments of the United States with relation thereto."

This bill was presented, read twice, and referred to the committee on agriculture in the House of Representatives and ordered to be printed, and was then referred by said committee to the Department of Agriculture for consideration. No further action was taken and no report was ever made either from the Department of Agriculture to the committee or from the committee to the House. It was a matter of considerable discussion between myself and the promoter of the bill and various parties who met in my office. A mere casual examination of the bill will convince anyone that in its present form it is improbable that it can secure a majority of adherents. It is very drastic and its principal objection is that if carried out its full extent would be an embargo on commerce or would, if enforced, drive railroads into bankruptcy and a large number of people into the penitentiary. Mr. Caminetti does not claim that his bill was perfect, and admits that in some respects it was crude. He only desired that all parties interested in the eradication of disease and pests which affect fruit should unite on some common ground and present such modifications and amendments as would make the law effective with the least injury to individuals, corporations and communities. No common ground has yet been found, and I suggest that inasmuch as this bill or one of like character may be presented in the coming congress, the matter should be carefully considered by the representatives of all interests and localities.

This bill is simply the precursor of many efforts to legislate on the subject and may well afford to wait for final consummation until the subject has had full discussion. It is in the line of an honest effort to stay the ravages that place in peril our whole fruit industry. The effort has my most hearty sympathy; but as I have intimated before, it should not go alone. Legislation should cover four points: First, legislation by the general government affecting interstate commerce in fruits and fruit trees among the states; second, legislation by the states vigorously directed and executed for the extirpation within the state; third, legislation on the part of the general government preventing or controling the importation of infected fruits and plants; fourth, liberal appropriations by both the state and general government for the investigation of all contagious diseases and pestiferous insects and experimentation as to the best methods of eradication. I might add that a fifth point is perhaps more essential than either of the preceding four, to wit: That wholesome public sentiment should back up this legislation and that moral courage on the part of the individual shall reconcile him to the absolute destruction, if necessary, of his own property affected.

Chrysanthemum shows are being held in all the principal cities of this country and England.

From Various Points.

The Stecher Lithographic Company was awarded a medal at the World's Fair, for its exhibit of supplies for nurserymen, florists, seedsmen and horticulturists.

Nothing was more startling to the average visitor at the forestry building in Chicago than to find that Nebraska led in number of varieties of trees; 154 distinct and separate kinds were shown.

There are growing in the parks of Rochester 88 varieties of trees, 72 varieties of shrubs and ten varieties of vines. Highland park is used as a sort of nursery in which to propagate imported trees and shrubs.

On the college grounds at Ames we have a number of species and varieties of the bush honeysuckles, but the *Lonicera Ruprectiana* makes the largest bush of all and is loaded with the largest and handsomest berries. It is hardy and beautiful in all parts of the West. It should be propagated, but what shall we call it? Nurserymen will never write "*Lonicera Ruprectiana*" on their labels and if they do the planters will not be able to read it.—*Iowa State Register.*

An appropriation of $25,000 by the Boston City Council will be needed to protect standing trees and to pay for the planting of the saplings, and this sum the people are urged to insist upon having. Says the city forester: "Formerly the city furnished money enough so that I could act in the matter, and we gave out as many as 1,500 trees in a year, and all but two per cent. of them were planted successfully. Now I can do but little to save the trees, however much I may wish to do so."

The nurseries here in the Pacific Northwest have made much improvement in the past few years in the manner of digging their trees. Stub roots, or trees with roots chopped off carelessly near the trunks are now seldom seen. Nearly all the trees raised here are grown on whole roots. The seed having been planted in the open fields in fall or winter, the next fall these seedlings are then budded. Those who are planting largely of the prune trees should require they be budded or grafted on peach roots, especially for the western parts of Washington and Oregon. The peach root is the best feeder, does not send up sprouts and has been proved to be sufficiently long-lived.—*Northwest Horticulturist*, (Tacoma.)

The October *Century* says of Frederick Law Olmsted and his art gardening: "Every American knows how beautiful are the Chicago World's Fair grounds, how wholly the chance to make them beautiful has sprung from Mr. Olmsted's preliminary treatment, and how singularly novel, how boldly imaginative, as well as practical and skillful, this treatment has been. Everyone who honors a great and conscientious, a public-spirited and widely-useful artist must be glad that Mr. Olmsted had this conspicuous opportunity to win his fellow-countrymen's praise; and everyone who loves the art he practices must rejoice that, in thus distinguishing himself, he has lifted landscape-gardening to a higher place than it ever held before in the interest and respect of our public. But in doing this he has merely carried on a great educational work which began with the creation of Central Park."

RECENT PUBLICATIONS.

The World's Columbian Exposition is closed. Its beauties and its wonders will soon become only a memory with the millions who gazed upon them during the gay summer that has passed. Instinctively all are turning to some means of preserving, as far as possible, the scenes of an undertaking heretofore unsurpassed. In no department of the entire exhibit was greater progress shown than in that of art, and nothing could be more appropriate than that the best endeavor of the most skillful artists of the world should be put forth in the direction of preservation for future generations of what was laid before the world at Jackson Park, Chicago, during six months of the year 1893. It has been reserved for the Bancroft Company, publishers, of Chicago and San Francisco, for thirty-seven years the leading house on the Pacific coast, to lead all others in this work. This company has planned and put in operation the production of a description of the Fair which it is impossible to excel. Under the simple title, "The Book of the Fair," there is included all that modern thought, experience and taste can produce. It is a work of 1,000 imperial folio pages, 12 x 16 inches, printed on the finest enameled paper. There will be no less than 2,000 superb pictures of all sizes, up to a full page. The work challenges all competition in its attainment of the highest standard of excellence. The literary material is unexceptional and the typography is perfect. The subjects are treated in the most generous spirit and in the most entertaining manner. Detailed description of the work would fill a volume as large as the book itself. To the entertainment and instruction of the people of all ages and places "The Book of the Fair" is as the Fair to civilization, a summary of the best efforts of mankind. The exhibition was but for a summer; the book is for all time. The work is issued in twenty-five parts, and the early numbers are now coming from the press. Chicago: THE BANCROFT COMPANY, Auditorium Building.

The *Rural Californian* for October is a profusely illustrated edition, presenting in a most attractive and instructive manner an account of the great work that has been done in irrigation in California, producing gardens out of deserts. The frontispiece presents pictures of the leading men who have been connected with the irrigation questions of the day. No review of the subject ever published has been so complete and accurate. The publication was in connection with the International Irrigation Congress, held in Los Angeles last month. There are 2,000,000 acres of choice government land in Southern California which is absolutely of no value without irrigating systems.

A publication of great value is Bulletin No. 4 of the division of vegetable pathology, U. S. Department of Agriculture, detailing experiments with fertilizers for the prevention and cure of peach yellows, by Erwin F. Smith, special agent.

The monthly reports of the statistician of the U. S. Department of Agriculture, Henry A. Robinson, are of great value for comparisons, and the marking of progress in the various agricultural industries of this and other countries.

CATALOGUES RECEIVED.—F. James, Ussy, France; Stone & Wellington, Toronto, Ont.; Walter C. Slocock, Woking, Surrey, Eng.; P. Lambert, Trier, Germany; Edouard Parre, Ledeberg-Gand, Belgium; James Mott, Orlando Nurseries, Orlando, Fla.; William Watson, Rosedale Nurseries, Brenham, Tex.

NURSERY EXHIBITS AT THE FAIR.

Concerning the nursery exhibit which was presented at the World's Fair, Professor L. H. Bailey says :

"The fruit-tree nurserymen of America are wholly unrepresented. In fact, the only really worthy American effort at nursery display is made by Ellwanger & Barry upon the wooded island, and this exhibition is confined to ornamental plants. Once it was proposed to have American nurseries in actual operation, from the raising of the seedlings to the budding and grafting and the handling of marketable trees ; but the time was too short for accomplishing so much, and the nurserymen were not inclined to respond quickly. As it is, the nursery grounds in the Plaisance are occupied chiefly by California with a citrous orchard and various specimen plants, by a mixed collection from Mexico, three exhibits of evergreens by Illinois and Wisconsin nurserymen, and displays by five French firms.

"California fills about half the entire area. This display makes little attempt to show nursery stocks or methods. The greater portion is an orchard of oranges, lemons and other citrous fruits, and is really a mate to the small orchard in the north court of the Horticultural Building. Many of these trees now bear nearly full-grown fruits, the product of flowers which appeared before the trees were set in their present quarters. Mediterranean sweet oranges, Villa Franca lemons and some others are set fairly well with new fruits from the flowers which appeared in June.

"The chief attraction in nursery displays, is in the French section, where displays of fruit trees and a very few ornamentals are shown by Pinguet-Guindon, of Tours ; Ausseur-Sertier, of Liensaint ; L. Paillet, of Vallee de Chatenay, near Paris ; Honore Defresne et Fils, of Vitry ; and Croux et Fils, of Sceaux. Most of the fruit stock in these displays is trained in various fashions to fit it for growing upon walls or espaliers, or as globe-headed tall trees to stand in the centre areas of small gardens. The method of training apples, pears, and other fruit-trees on wires, much after the manner of training grapes, is rarely seen in America, but in the confined areas of European countries it is common. The fruits which are obtained from these little trees are large and excellent, and usually sell for fancy prices. An apple-tree which is trained to a one-arm cordon, the arm being eight or ten feet long, may be expected to mature from six to a dozen fruits. Of the better varieties, these fruits sell from one to three francs apiece in midwinter. This is especially true of Colville Blanc, which is one of the best varieties and a long keeper. A French gardener informs me that he sold a basket of these apples, containing twelve fruits, for forty-five francs last February. It is interesting to note how different the varieties of these French trees are from our own fruits. Among apples one notices the varieties of high quality and difficult culture. It must be a matter of chagrin to Americans to know that the only important exhibits of fruit tree stocks are from France ; and that there are no exhibits whatever from any source of small fruit plants."

AMPELOPSIS VEITCHII.

Attracted by the note in this column last week on Boston, or Japanese Ivy, George S. Conover, a prominent florist and historian of Geneva, sends us a very interesting account of how the plant was introduced in this country, says the Rochester *Post-Express* : It seems that the Flower City deserves even more credit for it than does Boston. In November, 1891, a note in *Meehan's Monthly*, written by Thomas Meehan, the veteran Philadelphia horticulturist, said : "Probably the earliest plant of *Ampelopsis Veitchii*, or Japan Ivy, which is now so well known over the Union, had its merits first made known by the covering of Mr. Conover's house. Views and photographs of this early plant helped to make it known throughout the country." In detailed explanation of this Mr. Conover says : "My oldest plant was procured in the winter of 1868-9 from John Charlton, florist and nurseryman, University Avenue and Culver street, Rochester, N. Y. He had just imported the plant and was trying to introduce it, but after $5 worth of advertising succeeded in selling only $3 worth of plants. It was a small, tiny affair at first and we thought it would make a fine basket plant ; we did not know whether it was hardy or not, and had no idea it would become such a big plant. The experiment was watched with great interest by horticulturists, and when my plant was found to be perfectly hardy, and a strong grower, clinging tightly as no other plant did, it began to be popular, and at Mr. Vick's request I had it photographed. Mr. Vick published a cut of it in the magazine he was then publishing, and electros were freely furnished to all the horticultural papers in the United States, that wanted it. This gave the plant a big start, and now the demand almost exceeds the supply."

George Nicholson, curator of the Royal Gardens at Kew, England, said of his recent visit to this country : The use of *Ampelopsis Veitchii* in such abundance as I saw it covering the walls of buildings in Boston was novel to me and struck me as being exceedingly beautiful. I do not wonder that the plant has the name of the Boston Ivy here, for the climate evidently well agrees with it. I did not see the striking autumnal tints that are produced later, but the plants seem to flourish on a larger scale than I ever saw them in Europe."

California horticulturists are striving to produce a seedless grape which will excel the Sultana and Thompson.

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U.S. DEPARTMENT OF AGRICULTURE RECEIVED U.S. DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., DECEMBER, 1893. NO. 1.

ADDITIONAL REPORTS OF FALL SALES.

Following are additional reports of fall sales :

ROSELLE, N. J., Nov. 15.— Flemer & Felmly report that business has been very good during the year and that the demand, particularly for hardy stock, has been quite up to that of preceding years. Increasing business has necessitated important improvements in their nursery.

BRIDGEPORT, IND., Nov. 4.— Albertson & Hobbs report : "There are not many large nurseries in Indiana, but there are a great many small ones doing a small home business. So far as we have heard from them business has been good this season, and many of them report a larger packing than ever before. With us we think we are safe in saying that we have sent out from one-third to one-half more goods than in any one season since we have been in business. Prices have been low, but we think the good business certainly indicates that the stock will be used up much cleaner than was anticipated earlier in the season, and that there is a good showing for an advance in prices in the near future. With the leading nurserymen in the state the plantings in the last two or three years have been rather larger than they were before, yet many of the smaller ones have gone out of business and have done less planting. Our business here with the railroad, in and out, this season, including material, stock, etc., has amounted to between twenty and thirty car-loads."

DANSVILLE, Nov. 2. — C. F. McNair & Co. report : "The trade in Dansville this season has been exceptionally favorable, though prices were in some respects not all that can be desired. Sales, as far as we are concerned, have been far ahead of any other fall's trade in our business. We are also advised that the same is true with several other firms in town. With a few exceptions, we think nearly all have held their own. The outlook is much more encouraging than a year ago. Plums, cherries and pears were in good demand, with a light surplus unsold. Our past spring's planting was about as usual. Most of the plantings, however, were from 20 to 40 per cent. less than the previous year."

LOUISIANA, MO., Nov. 15.— Stark Brothers report : "Plant of spring '93 embraced 2,526,300 apple, whole root grafts ; 125,000 apple stocks ; 30,600 crab grafts ; 63,600 pear grafts ; 421,000 pear stocks ; 69,800 quince grafts ; 150,000 quince stocks ; 70,500 shrubs, etc ; 180,000 cherry stocks ; 488,000 plum stocks (Mariana); 4,000,000 plum cuttings (Mariana); car-load peach pits ; considerable lots of ornamental trees, &c., including 116,000 rose layers, 60,000 rose cuttings, 46,000 rose stocks (Mad. Plantier). The latter we shall use exclusively for all varieties of roses we bud, discarding the Manetti, which, as is well known, is undesirable in several respects, makes unwieldy roots, suckers badly, and H. P.'s budded thereon cease growing early and consequently flower very sparingly in autumn. None of these objections obtain against the Plantier stock ; a block of buds on Plantier were full of blossoms until severe frost this season, while those on Manetti alongside showed only a rose here and there ; and again, if the bud should die out the Plantier is a much more satisfactory rose than the Manetti. Fall trade has been and continues good, better than anticipated. In fact, retail sales of salesmen averaged right along week by week ahead of corresponding weeks of last year, with exception of few weeks towards the end of the season. The only material difference noted from last season is that the large orders from the far west are not materializing. A California nurseryman, G. C. Roeding, who visited us last week, says prunes, as well as some other things, are a great over-stock there, and dull at four cents and the probabilities are that large quantities will be burned. Those of the eastern brethren who had thousands upon thousands of peach trees burned by the California inspectors because, forsooth, there were a few borers found in them, will, no doubt, extend condolences. Varieties propagated are largely of standard kinds, though several new sorts are grown largely. In apples, Akin, Babbitt, Early Colton, Kinnaird, Springdale, and especially Shackleford and Paragon (Mam. Blk. Twig)—the latter has made a record this 'year of the great apple failure' that is bound to tell. The following letter was written us the past fall by Hon. W. G. Vincenheller, Arkansas State Commissioner of Agriculture : 'Have made a tour of the state collecting apples for the World's Fair. Crop short, quality poor, scabby, except M. B. Twig, best and most prolific of all; bearing perfect fruit in abundance when all others are nearly a failure.' In pears budded large blocks of Koonce and Krull, the earliest and latest varieties, but very light of Bessimianka and Taihe (Japan Golden Russet). Both have fruited here several years ; the former is neither entirely seedless nor at all desirable quality where better sorts can be grown, but is doubtless of value far north. Taihe will bear pears, but the less

said of the quality the better. Idaho again, the only sort to blight in nursery rows — 2-year trees. Of newer plums, the Japanese sorts have been largely budded, particularly Red June and Orient, as well as all the buds to be had of Majestic, a perfect free-stone Damson and the largest Damson by far we have yet seen. In peaches, heavy on Alberta as usual, together with Sneed, Northern Apricot — a variety doubtless equally hardy as Crosby, with the advantage of larger size and most exquisite quality; Gold Dust, a large yellow cling, characized by President Evans of the Olden Fruit Co. as 'the finest cling peach ever seen.' In cherries, the Abbesse (Abbesse de Oignes, Sweet Duke) is not only the finest grower we have ever propagated, but the tree has proven hardy even in Iowa and fruits abundantly, and, although a Duke, is nearly as sweet as the Heart cherries."

LAKE CITY, MINN., NOV. 28.—The Jewell Nursery Company reports much progress during the year. The fall sales with them were nearly if not quite up to the standard. They planted this season over two million trees and plants. In this planting were 450,000 apple, 10,000 plum, 100,000 shade, ornamental and evergreen trees, 100,000 grape, 250,000 currants, 200,000 raspberries and blackberries, and 100,000 ornamental shrubs, climbing vines and roses.

WEST CHESTER, PA., NOV. 25.—Hoopes Brothers & Thomas report: "The present autumn is fully up to the general overage owing to the increased demand for certain kinds of stock."

A FRENCH EXPERT'S OPINION.

A recent issue of the New York *Tribune* contained an interesting talk with Henri L. de Vilmorin, of the great seed house of Vilmorin, Andrieux & Co., Paris, upon American horticulture, thus supplementing that paper's extended interview with George Nicholson of the Royal Gardens, at Kew, England. M. de Vilmorin is perpetual secretary of the Agricultural Society of France, perhaps the most important organization of its kind on the continent; is vice-president of the National Horticultural Society of France, and the real executive of that body. He is the author of many important papers on the breeding of cultivated wheat and other economic plants, and is esteemed highly by scientific men and horticulturists of all countries. At the recent Congress of Horticulture in Chicago he read a paper on "Pedigree or Grade Races in Horticulture." "My recent trip through the United States," said he, was more largely designed for the study of agriculture than of horticulture. With this special mission before me, I framed my itinerary more with a view to seeing large fields of wheat than to observe the development of horticulture. Naturally, however, I took in as much in the way of horticulture as I could, because it is in my line of business and I am much interested in anything connected with the subject. I send many seeds to the United States, and I wanted to be well posted in the matter of local tastes, and have well-defined ideas as to what sort of articles they liked. I saw a great deal in traveling about and in my studies on the subject of horticulture which pleased me very much. I had been here three years ago, and in my recent travels what I distinctly saw was a great change for the better. One of the first things I noticed during my first visit, and which still forces itself on the attention, is the rarity of private gardens here. It strikes me that the people do not form the same attachment to a family place in this country which they do in the old world.

"The horticultural work at the World's Fair in Chicago was certainly creditable and the more so because, as you know, it was accomplished under unusual difficulties. It shows very well how difficult it is with the American climate to turn to good account many pretty annuals with which we in Europe accomplish such good results. Here there is not time to develop these strong plants before they are scorched and burned by the summer sun. Some of the California plants and your own native plants do well. After all, the establishment of parks, extensive pleasure grounds, consisting chiefly of grass, trees and shrub plantations, are more to the American taste and have higher possibilities here than mere flower gardens; but I have had much gratification and admiration at what I have seen all over the country. I noticed a very great change in the Arnold Arboretum in the space of three years, and some of the plantations are already giving a most picturesque effect which is pleasing to the eye. One great advantage of the arboretum is the opportunities it affords for giving comparative ideas. It shows, for instance, in different species the many varieties of one and the same tree, and demonstrates the habit, the appearance and the rate of growth of the type, and of its different forms, and that is a very important part in education on this subject. Some of the groups of large trees, such as the oak and the maple, the ash and the hickory, are showing already what they will become in time. I happened to be more familiar than most of my countrymen with the subject of autumn colors in the foliage of American trees, as I was bred and educated in the middle of plantations begun sixty years ago by my grandfather, who was an intimate friend of the Michaux, especially the younger, who sent him seeds of all the Eastern North American trees, and the plantations made at that time are now full-grown trees, that in the dry and cold climate of Central France turn as bright in their colors as the same species do in America. This plantation is so well known that every autumn visitors travel long journeys to see these rows of red and scarlet and orange and yellow American trees, so brilliant in the October sunlight.

"One of the parts of this country which struck me most forcibly in the studies of horticulture was California, which is so entirely different in its climate from the rest of America. Flowers seem to be great favorites there, and beautiful gardens are not so scarce as in other parts of this country. Those of Governor Stanford at Menlo Park are especially

beautiful, well planted and well kept. The Golden Gate Park, of San Francisco, deserves also a mention, not only for its extent and beautiful situation, but for the use that is made in it of flowering perennials in large quantities for autumnal decoration, among them many cannas and Japanese anemones.

"I was especially delighted with the gardens of Southern California, which forcibly remind one of the beautiful gardens on the French and Italian Riviera. The plants grown in both places are almost identical, so that I found in Los Angeles and neighboring places much the same assortment of trees, shrubs, palms, climbers and herbaceous plants I am accustomed to see at Cannes, Nice or Mentone. One finds there the passion flower, Canna Indica, the Eschinus Melle and the like. It seems, however, to me that some more plants might be introduced, and that especially winter-flowering acacias and the Banksian roses which form so permanent a feature of the Riviera Gardens might be introduced more largely into California. The gardens of Mrs. Hollenbeck at Los Angeles and of Mr. Girard, in Chino Valley are fine specimens of California gardening, and the display demonstrates the resources of the soil and climate. I saw nothing more interesting in its promise for the future introduction of new and valuable plants than in the small garden of Mr. Harvey, the secretary of the local Horticultural Society of Los Angeles, who, as the result of extensive travels, has brought to that place a great many seeds and cuttings of new plants, and is testing their adaptability to the climate of California. In its slightly crowded state it reminds one much of the celebrated garden of Mr. Mazel, of Golfe-Juan. The garden is scarcely an acre in extent, but from it more than $8,000 worth of new and higher grades of plants have been distributed during the last few years. He introduces the best of the classes that are common to the Riviera. The ground has been paid for twenty times over by the plants he has reared and distributed from that garden."

On the subject of fruit growing in America, M. de Vilmorin said: "It is evident that much attention is being given, and with handsome pecuniary results, to the growing of fruit in this country, but more especially in the State of California. The display of fruit at the World's Fair after August and continuing to the close of the Exposition was probably the finest and most extensive and varied that was ever brought together. I find that a great deal of attention is being given to the subject in each state, not only by private independent growers, but by the local horticultural and agricultural organizations, and by the aid of the experimental stations supported by the different states and by the national government. Through this systematic organization a comparative study of the fruit developed and the adaptability of particular varieties to particular states and sections of the country are intelligently determined. With this study of the influence of local conditions is associated investigation as to the particular insects most destructive to different species, and much knowledge is gained and of a valuable nature with regard to fungous diseases, so that fruit-growers are familiar with all the recent appliances which science has discovered to aid them against their enemies. In conclusion, I may say that more attention seems to be paid and to better purpose to fruit-growing in this country than in most European countries. The apples, peaches and grapes exhibited by the different states at the World's Fair and renewed by daily contributions by exhibitors was one of the striking features of the conduct of that department. Large consignments of fruit were sent every morning from different states, so that the specimens should be kept fresh all the time, and their display gave not only proofs of successful cultivation, but of enterprise and organization which it would not be possible to match in any other part of the world."

SPRING AND FALL CLUB.

The Rochester *Democrat and Chronicle* has this account of the "Spring and Fall Club": "Perhaps you have never heard of this club. It has been in existence for years. It is exceedingly flourishing. Its membership has increased rapidly during the past few years. The club hasn't a club house or any other house for that matter. Its membership is made up of two classes, active and honorary. The active members are the ones who have given the club its name. They are 'spring and fall' men. If you have never heard of the club you know dozens of its members. They are absolutely the best dressed young men in this town. They are the only people who have not felt the stringency in the money market. The reason they have not felt it is, because they got used to it long before the bankers, workingmen and business men generally, knew it was here.

"The 'spring and fall' men are those who work in the spring and fall and wear good clothes the remainder of the year. The honorary members are life members as well. They never work and they wear good clothes the year around. A man who is acquainted with the daily life of the members of the club fell to discussing them a few days ago with a reporter.

"'There are dozens of young men in this city,' said he, 'who wear good clothes, never seem to have anything to do except, perhaps, ogle a pretty girl, and have no visible means of support. As a matter of fact they disappear from the streets for a few weeks in the spring and fall. No one seems to know where they have gone. They all disappear at the same time. Then all at once the whole brigade is back on duty, walking the streets. When they first made their appearance if an inventory were taken, they would be found to have from $1.50 to $4 each in money on their persons. That's cigarette money, and if they were to go hungry, not one cent of it would go for food.

"'Where did they all disappear to? You know Rochester is celebrated for its nurseries. The busy

season in the nurseries comes twice a year, spring and fall. They have got to get lots of extra help. Some day after you miss some of these spring and fall young men from the streets just visit a nursery. You will have to look close to recognize them, for they have laid aside the patent-leather shoe, the Knox hat and the blazing red or sky-blue four-in-hand. The work lasts just long enough to suit these fellows. They buckle down to business while it lasts, go home when their work is done for the day, and remain there until it is time to start for the nurseries the next day. They don't appear on the streets because they are ashamed to work and in the next place they wish to give the impression to their friends that they are out of the city on a vacation. When the season is at an end they have saved up about $50 each. As soon as they get the money they steer for 'their tailors,' get measured for a $40 suit of clothes, make for the hat store, pay $4 for a hat, hang a shoe store up for a pair of patent-leather shoes, visit a furnishing goods store and lay in a supply of neckwear."

WORLD'S FAIR AWARDS.

The department of pomology at the World's Columbian Exposition made the following awards in the sub-department of nurseries and nursery trade:

Alabama—Huntsville wholesale nurseries, Huntsville system of grading and marking nursery stock.

Fruit Trees and methods of raising and grafting—Nebraska—Stevenson & Thomas, North Bend, Neb.

California—State of California, Sacramento, trees in orchard.

Illinois—E. A. Bechtels & Sons, Staunton, double-flowering apple.

Ornamental trees and shrubs, method of growing, transplanting, etc.,—New York—Ellwanger & Barry, Rochester, deciduous trees and shrubs; Parsons Sons & Co., Flushing, collection of trees.

Illinois—P. S. Peterson, Chicago, large trees transplanted; E. H. Ricker & Co., Elgin, display of evergreens and deciduous plants: D. Hill, Dundee, collection hardy conifers.

Wisconsin—State Horticultural Society, Janesville, cranberry marsh.

Netherlands—Boskoop Nursery Association, collection magnolias; Jacob Jurrissen & Son, Naarden, display of trees and shrubs.

England—Anthony Waterer, Knapp Hill, coniferous evergreens.

Seeds, seed-raising, testing and distribution—New York—Peter Henderson, New York City, collection garden seeds.

New Jersey—Pitcher & Manda, Short Hills, collection of seeds.

Michigan—Michigan Seed Company, South Haven, flower and vegetable seeds.

Pennsylvania—H. A. Dreer, Philadelphia, collection of seeds.

Illinois—J. C. Vaughan, Chicago, collection of seeds.

Germany—S. C. Schmidt, Erfurt, seeds in glass; O. Knopf & Co., Erfurt, flower and garden seeds.

Tree and shrub seeds used for condiments and medicines—Wisconsin—Geo. Pinney, Evergreen, collection seeds and cones.

Germany—Bottscher & Volker, Gross Tabarz collection seeds; Helms, Sch., Gross Tabarz shrubs and conifer seeds.

Brazil—Estado Ceara, Ceara, tree and shrub seeds.

Among Growers and Dealers.

The Rogers Nursery Company has been incorporated at Moorestown, N. J., with a capital stock of $25,000. It will conduct the Fairview Nurseries.

Gilbert Costich, of Rochester, reports steady sales throughout November. He thinks there is prospect of rapid improvement in the nursery business.

George Gleason, representing Irving Rouse, and representatives of H. C. Graves & Son, of Lee's Summit, Mo , and of Stone & Wellington, Toronto, are in France.

Ellwanger & Barry are potting a general assortment of hardy roses for stock plants. They have received notice that the medal won by them at the World's Fair will be sent soon.

Prominent among specimens of chrysanthemums exhibited in Rochester recently was the George S. Conover grown from a seedling by Vick & Hill. The flower is a beautiful yellow, full and strong.

The plants exhibited by the Boskoop (Holland) Nursery Association at the World's Columbian Exposition, in competion with many exhibits from Holland, received the highest award for their superiority of quality, hardiness, strength, beauty of form and color.

Charles J. Brown, of Brown Brothers Company started for the Pacific Coast on November 28th, accompanied by his wife. He will pass most of the time during the next three months in California. He will visit the Portland office of the company. The Rochester office will be in the charge of Robert Brown during his brother's absence.

FRUIT CROP OF 1893.

The report of the statistician of United States Department of Agriculture shows that the grape product of the season as compared with an average crop was: For Maine, 101; New Hampshire, 101; New York, 99; New Jersey, 102; Delaware, 100; Florida, 100; Massachusetts, 91; Rhode Island, 92; Michigan, 101; Iowa, 101; Nevada, 100; California, 100; Pennsylvania, 94; Ohio, 91; Illinois, 86; Missouri, 77; Nebraska 73. The apple crop for Maine, 35; New York, 41; Michigan, 35; Ohio, 9; Indiana, 9; Illinois, 10; Iowa, 18; Kansas, 19; California, 96; Maryland, 77; Virginia, 79; Idaho, 97; Wisconsin, 48. The pear crop averaged from 60 to 80; in Kansas it was but 26. The statistician says: "The season just ended has been a bad one for the production of large fruits, with the one exception of grapes, which have yielded abundantly. Frost, wet, drouth, and high winds have successively interfered with proper bloom, set, growth, and maturity, and at the time of harvest a greater part of the orchards of the country were bare or nearly so."

JAPAN WEEPING ROSE-FLOWERED CHERRY.

CERASUS JAPONICA ROSEA PENDULA.

Among trees of drooping habit, there is none more beautiful than the one represented by the frontispiece of this issue. The beauty of the tree consists not only in its graceful, pendulous habit, but it has, besides, the merit of producing quantities of flowers in the blossoming season, and the branches when covered with these, give the tree a novel, interesting and charming effect, as will be seen from the picture.

The foliage of the tree, too, is handsome. This tree is well suited for either large or small places, and should be planted by itself, where it can have room to develop. By cutting, it can be confined to a small space, and if permitted to grow it will cover considerable ground in the course of time. No drooping tree of recent introduction has more merits than this. It was brought from Japan by Von Siebold. The photo-engraving is from a sample in the possession of Ellwanger & Barry.

During the month of December, 1892, the Italian ministry of agriculture published its preliminary estimate of the wine production of the Kingdom of Italy for 1892, placing the aggregate at 881,419,055 gallons. In the revised estimate just published this quantity is increased to 897,432,195 gallons, or 79,789,035 gallons less than the wine product for 1891. The decrease was caused by the unfavorable season in Sicily, in the South Mediterranean region, in Rome, and in Umbria. Since 1890 there has been a steady increase in the area planted to vines from 8,476,425 acres in that year to 8,565,591 acres in 1892. The range of the yield per acre is wide, from a minimum production of three-tenths of a gallon to a maximum of 750, or even 850, gallons per acre, the average yield being 104.8 gallons, as against 114.8 gallons during the preceding year. The importation of wine into Italy is comparatively unimportant. While the exportation is large, it does not nearly reach 10 per cent. of the quantity retained for home consumption.

In no section of the country is so much attention paid to practical experiments with a view to removing causes of failure in fruit crops as in California. This is the case naturally, because upon her fruit crop that state places most of her dependence. Professor Alexander Craw, Entomologist of the California State Board of Horticulture recently distributed 494 colonies of rhizobius ventralis, the parasite which destroys the black scale. This scale affects everything on the coast from olive trees to telegraph poles. The parasite has proved to be a most efficient destroyer of the great pest. A more thorough study of the causes of fruit failure in other sections and a general application of remedies would encourage fruit growers who feel that profits in this direction are rapidly decreasing.



WILLIAM SMITH.

The senior member of the W. & T. Smith Company, of Geneva, is one of the most experienced nurserymen in this country. His retiring disposition is the cause of his not being so well known as he should be, but his friends and acquaintances constitute a wide circle. The firm of W. & T. & E. Smith began business in 1846. A few years afterward Edward Smith withdrew and established a fruit business on Seneca Lake, which has become extensive. No firm stands higher in the nursery trade than does that of W. & T. Smith. William Smith is noted for strict integrity. He has always been a champion of fair dealing. He is 76 years of age, and like his brother, Thomas, is hale and hearty, actively participating daily in the transaction of the immense business of the company. The subject of this sketch is an expert in distinguishing varieties of fruit trees in a dormant condition, being one of the few in the world who can do this under all conditions. He is a great reader and a close student of the sciences. He has established an observatory at Geneva which for some time has been under the charge of the well-known astronomer, Professor Brooks. There is nothing connected with the conduct of a large nursery and the raising of fruit of all kinds which William Smith does not thoroughly understand. His opinions on horticultural matters are highly valued. A pioneer in the nursery business in Western New York, he has seen many changes.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
305 COX BUILDING, ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months ..... .50
Foreign Subscriptions 1.25
Six Months ..... .75

Advertising rates will be sent upon application. Advertisements should reach this office by the 20th of the month previous to the date of issue.

Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., DECEMBER, 1893.

SIGNS OF PROGRESS.

There are many indications that of late long steps forward have been taken by the nurserymen of the country. In many instances are the methods of to-day an improvement upon those of but a comparatively short time ago. These things are the direct result of the application of knowledge acquired from varied sources. The business is increasing rapidly ; the sales of the progressive growers and dealers are enlarging in greater ratio than ever before, and the newly entered tradesman, reaping the benefit of experience, starts where his older brother finds himself only after years of toil, through old to new methods. The nurseryman of to-day finds that the rapid pace makes it absolutely necessary to keep informed thoroughly. If he would keep up with the procession he must be in touch with every worthy movement for the advancement of the trade. The most prominent men in his business are devoting all their energy to the development of large undertakings which the necessities of the time have produced. These through the sharp competition which results, directly or indirectly effect every nurseryman in the country. Laws are being enacted which effect the nurseryman either favorably or unfavorably, and it is to his interest to support the one and oppose the other.

Until recently the nursery trade has been without an organ of its own. Nurserymen have been obliged to depend for information upon the horticultural and floricultural papers whose sympathies were entirely with the planters. In these papers it was impossible for the nurserymen to discuss the features of their trade. The need of a representative trade journal for nurserymen was urgently felt. At this time THE NATIONAL NURSERYMAN appeared and in the brief space of less than a year it has thoroughly occupied the field. From the start the new journal was cordially received and throughout the year letters have come continuously expressing the warmest appreciation of the journal and promising it substantial support. Its advertising columns have been generously patronized and advertisers have pronounced the results more than satisfactory. It is declared the best advertising medium for the trade.

No nurseryman can afford to be without the journal. It is a means of keeping informed of the progress of the trade in all sections, at small cost. Leading nurserymen have said that a single issue has been worth to them the price of subscription. The journal is published in the interests of the trade ; each individual in the trade should support it with his subscription.

IMPORTED NURSERY STOCK.

The free list of the proposed tariff includes "plants, trees, shrubs and vines of all kinds commonly known as nursery stock." The McKinley bill imposed a duty of 20 per cent. on imported nursery stock. Previous to the passage of that act there had been no duty on such stock though in former years an ad valorem duty equal to that of the present time was in force. The present duty of 20 per cent. was secured through the efforts of leading importers who brought into this country only the best quality of stock and who wished protection against the importation of an inferior quality. But on seedlings the duty cost is so small that no encouragement toward the raising of seedlings in this country was caused, for the French seedlings grown at a cost for labor of 45 cents per day could be imported, even with the duty, for less than they could be grown here at a cost for labor of $1.25 per day, labor being the chief item in their production. Therefore the inferior as well as the superior qualities have been brought over freely. It has been felt by those who deal in the higher grades of imported seedlings that a specific duty of from $1.50 to $2.00 per thousand should be imposed. But this year the efforts of those who seek to make the cost of producing nursery stock for market as low as possible have succeeded in having recommended the removal of all duty on the imported stocks.

The effect of this provision in the proposed tariff would ordinarily induce a greater amount of planting ; but the condition of prices both before and since the business depression is such that little fear of over-production from this source need be entertained. It happens that by the reason of the varied methods of conducting the nursery business, republicans who would ordinarily be for protection are in favor of a free list for nursery stock, and democrats, ordinarily free-traders, are in favor of a duty. But those who favored the present ad valorem duty are content to await the operation of a free trade

in nursery stock, for much of the fraud on the government, and consequent injury to home nursery interests, attending the present system will be eliminated. At present there is much fictitious valuation of imported stock at the custom house.

If the proposed tariff goes into effect by March 1st a large amount of nursery stock will come into this country without duty, but if the passage of the bill is delayed until April 1st, or even until March 15th, not any will come in duty free; for importations for the season will have ceased by the latter date.

No work in special departments connected with the U. S. Department of Agriculture has been of greater importance than that of Professor D. W. Coquillett and Albert Koebele, of the division of entomology, who have devoted their entire attention during the last few years to the preservation of the vast fruit interests of California and the Pacific coast from the ravages of insects and disease. Both of these gentlemen have been withdrawn from that field by the Department at Washington on account of differences between the division and the California State Board of Horticulture. It is to be hoped that the field will not be left long unoccupied. Special investigations of this kind by the Department at Washington are of great importance. The work of the Department's representative in Western New York recently was of practical value.

The argument of Professor Van Deman for a revision of the names of fruits in nurserymen's catalogues is bearing fruit. Leonard Coates, proprietor of the Napa Valley Nurseries, California, has issued a handsome catalogue in which the names of fruits have been revised with the aid of Professor Van Deman, so that they conform to the nomenclature of the American Pomological Society. Among apples the Hubbardston Nonesuch is simply Hubbardston; Marshall's Red is Marshall; Smith's Cider is Smith and Esopus Spitzenberg is Esopus. It is to be hoped this plan will be adopted generally by nurserymen.

SUBSCRIPTIONS.

All who have not subscribed for The National Nurseryman should do so at once. It is the only trade paper issued for nurserymen and it should receive the hearty support of all. That there was urgent need for such a publication was declared upon all sides and since its appearance it has been pronounced just what was wanted. The hearty support of all nurserymen, both growers and dealers, will make it a success. It is one of the handsomest journals issued in any trade. Can you afford to be without it? It receives the support of the leading growers and dealers of the country. The subscription price is very low.

JUDGING OF GRAPES AT FAIRS.

To the Editor of The National Nurseryman:

State, county, local and other agricultural fairs are over again for this year. I have attended a good many of these exhibitions all over the country, especially in grape-growing sections, and must confess that the honor of being a judge is not a very desirable one. Disputes have arisen within the past five years by exhibiting girdled grapes for competition. The decisions of the judges must be final and should not be changed under any circumstances. There are obstacles to be overcome. It is therefore the mission and destiny of the judges to overcome them by giving their own, competent, sound rulings and decisions. The judges are always carefully selected by the societies; none but the best experts and competent gentlemen are trusted with this post of honor.

It is well to exhibit girdled grapes, showing the skill of the grower and displaying to the visitors their beauties brought on by artificial means, but they should never be allowed to be entered for competition with the general class. These grapes are deceivers to the public, inducing the lovers of this most delicious of our fruits to buy and plant vines of these kinds, but only finding out afterwards, that after years of patient waiting, they are disappointed in the results of what they expected to get. The skill of the grower, however, should be rewarded, either by adding a class for girdled grapes, or by recommending a special premium to be given to the exhibitor.

A case of this kind came to my observation at the fair of the Western New York Agricultural Society. Among the exhibits of grapes were some very fine specimens, as the large and fine crop of this year should warrant. For several years a grower of grapes from a neighboring town has shown some very fine girdled varieties, which were unusually large and real beauties to look upon. From year to year he entered them for competition, but was barred out by the expert and conscientious judges. The fine display of his grapes this year was, as usual, refused premiums under the general entry by the judges, who were well known nurserymen and authorities on grapes, after a long and careful consultation; recommending, however, the exhibitor for a special prize for the fine lay-out. This ended the work of the judges, but not with their decision. A complaint was entered by the exhibitor before the society which after a short deliberation reversed the decision of the judges, giving this exhibitor first premium, while his opponent who showed the naturally grown fruit in perfect form and quality, had to be contented with a second award. Is this fair and square dealing? If the decision of the judges is not final, what is the use of having upright and competent judges, when the society makes

changes, which anyone with the least knowledge of facts would condemn? The entire confidence of the exhibitors in every branch rests with the judges, and their decisions should not be tampered with, as such actions will keep others from accepting the *honorable* appointment as judges, if they cannot enjoy the full trust of the public at large and the society, and be permitted to act according to the dictates of their consciences. Many such actions will create dissatisfaction, lessen the number of exhibitors, and our fairs, which are a source of instruction, will lose in interest. The premium lists of our fairs should be revised in every department according to improvements and new introductions.

Rochester, N. Y. CHAS. MITZKY.

NURSERY STOCK ON THE FREE LIST.

Congressman Sereno E. Payne of Auburn, N. Y., who had as much to do with the agricultural schedule of the McKinley bill as anyone, said a few days ago:

It seems to me that Rochester has received a very severe blow indeed. The democratic members of the ways and means committee propose to put nursery stock on the free list. There is probably no county in the United States so closely interested in this item as Monroe county. Competition among nurserymen has been spirited and this competition has reduced prices so low that even with the protection afforded by the McKinley bill the Rochester nurserymen have had to sail very close to the wind to make a dollar in competition with the French. Now, if that protection is removed entirely, France will occupy many of the fields now controlled by the people of Rochester, and American enterprise will suffer for the benefit of France. Nor will the purchaser of nursery stock receive adequate benefits. The principal and practically the only result will be to seriously embarrass a business which it has taken years of energy and toil to build up.

The largest importer in this country is Irving Rouse. He said: "I would be pleased to see a specific duty on imported nursery stock so that only the best quality would be imported. I am willing, however, to await the result of free importation and note the effect. The majority of nurserymen, I think, are in favor of free importation."

William C. Barry said: "In the opinion of most nurserymen the bill is satisfactory. As far as I am concerned I would be glad to see a moderate duty imposed on several kinds of stock. It will be to the interest of a great many nurserymen that stock should come in free of duty. The disadvantage lies in this, that growers abroad will take advantage of the opportunity to ship into this country grades of stock that can be sold cheaply and the country will be flooded with goods that come in direct competition with home grown stock. American nurserymen buy largely abroad seedlings of the apple, plum, cherry and pear, and while they believe that in purchasing these goods free of duty they are securing good bargains, there is another standpoint from which to look at the matter. The competition sure to arise from this stock's coming in free of duty will, in my opinion, be detrimental to business, rather than otherwise."

THE IOWA APPLE CROP.

For a number of years in succession we have been able to exhibit at the state fair from 100 to 160 varieties of fine smooth apples. This year with the most careful selection we could not show more than a dozen varieties and the specimens of these would be poor. The causes are very evident. Last year every tree nearly was loaded with fruit, and the season in this section was the culminating of three years of drought. The water level was so low that thousands of forest trees in the timber were wholly or partially killed. Of course the apple trees had a hard time in developing their fruit and could not make any preparation for even blossoming the past spring. The Russian apples last spring had no blossoms except on varieties that bore lightly or not at all last year. This is true with the iron-clad varieties over the whole of Northern Iowa where the apple crop was heavy in 1892. In the south part of the state the varieties of the old list failed to bear last year and by this rule they should have been laden this year. But it will be remembered that scab of leaf was more general last year with our common sorts and the wild crab than was ever before known in the West. This condition of foliage would be a sufficient cause for the dropping of the fruit this year. This is common over the prairie states and the East to the Atlantic. Hence the show of apples this fall at the World's Fair was the poorest ever seen at our expositions, or the Pomological Society exhibits. This is truly unfortunate this year when we have so many thousands of foreigners who will not believe that this Columbian year is the one off year of the century. Yet on the lower soils of Western Iowa, from Decatur county north to Sioux county, can be found specimens of fully 100 varieties of the apple that will grade fairly well, also many varieties of pears and plums. In the line of grapes we can during the fall make an exhibit that cannot be duplicated in the Eastern states.—*Iowa State Register.*

PROFESSOR BAILEY ON APRICOTS.

Few new fruits have been more indiscriminately praised, and concerning which so little is known, as the Russian apricot. Probably the chief reason for this indefinite knowledge is the too common feeling that, at best, apricots are not suited for growing in the northern states, and no serious attention is given them, yet, if care in selection of site is observed and some attention is given to varieties, apricot-growing is capable of affording excellent commercial results even in New York state. There are now considerable plantations of apricots in Western New York, the most prominent being the large orchard of E. Smith & Sons, on Seneca lake. The apricot-tree is fully as hardy as the peach. It blooms early, and is liable to be caught by late spring frosts, therefore it is essential that the site be one where vegetation starts late or where the spring temperature is equal-

ized by the presence of a large body of water. The chief merit attributed to the Russian apricot is its hardiness, but my own experience, extending over about eight years, shows that in Central Michigan and in New York the Russian stock is as likely to be injured by climate as the common and better varieties. Early varieties grown in the Smith orchard, Seneca lake, are Harris, Smith's Early, Early Moorpark and Early Golden. These had all been harvested, with the exception of a few of the Early Moorpark. One tree, which was simply called the Russian, still bore a few small, deep-yellow fruits, very poor in quality. The proprietors report that the other Russians tried by them are of no greater value. The Harris and Smith's Early are favorites for the early market. In marketing apricots, the matter of variety is ignored. Fruit is graded according to size, fairness and form. The crates are marked "choice" for the first grade, and the second go in as plain apricots, for canning, preserving, etc. The California package is the one used for shipping. It consists of one layer of four boxes, the standard size used for choice fruits. Mr. Smith's markets are chiefly Rochester and Philadelphia. No fruit is shipped to New York. —*Garden and Forest.*

PRUNUS PUMILA AS A STOCK.

"J. L. B." says in the *Iowa State Register*, concerning the dwarf or sand cherry (Prunus Pumila). This year we have budded about 5,000 1-year-old sand cherry seedlings with a dozen or more varieties of the sweet and sour cherries. The work was done in July, fully a month in advance of our budding the plum. This early budding resulted from the fact that, in a small way, our prior budding done later was a total failure on this stock. This season our buds have taken uniformly and perfectly. But farther we do not know. I do not know of a single tree of the cherry on this stock that is more than two years old from the bud. So far these look well. As a stock for the cherry it is in the experimental stage. With the plum we have a longer experience. Trees six years old on this stock have made a perfect union, are dwarfed in size, and bear more freely than when worked on native plum stocks."

The thirty-ninth annual meeting of the Western New Horticultural Society will be held in this city on January 24th. Secretary Hall is making a special effort to increase the membership to 500. The number is now nearly 400. The State of New York made an admirable showing in the horticultural department at the World's Fair and the work of the members of the Western New York Society was prominent in that exhibit.

The Stecher Lithographic Company has increased its capital stock from $120,000 to $180,000.

GRAPE GROWING IN THE UNITED STATES.

In the United States the total area of the grape growing district is 401,271 acres, of which 307,575 acres are in bearing, divided among the following states: Illinois, Ohio, Kansas, Missouri, Georgia, North Carolina, Tennessee, Virginia, New York, California, and Arizona. Of the above California has 155,272 acres; Ohio, 28,087 acres; New York, 43,350 acres, including 1,000 in Erie county, Pennsylvania, in Chautauqua district. The total product in the United States in 1889 was 572,139 tons of grapes. The value of the plant in the State of New York in grape and vine culture is $20,400,000, and 25,000 persons are employed in connection with that industry. The acreage of bearing vines in New York State is divided in districts as follows: Keuka, 12,325; Canandaigua, 2,720; Ontario and Wayne, 1,020; Seneca, 4,250; Chautauqua, including a small portion of Erie county, Pa., 2,180 acres; Hudson River district, 11,050, and other counties, 2,805 acres. The market value of grapes per ton, sold in New York State exceeds that of any other State in the Union, excepting Georgia, which has only 1,938 acres, and Tennessee, which has 1,500 acres. New Mexico, New Jersey and other states and territories have 45,000 acres devoted to grape culture. Four-fifths of the grapes used for table purposes comprise the following varietes: Concord, Catawba, Delaware, Moore's Early, Niagara, Diana, Worden, Isabella, Wyoming and Brighton.

George C. Snow, Superintendent of the New York Bureau of Viticulture at the World's Columbian Exposition, says:

"It is within the recollection of many, as yet far from old, when grapes began to take any prominent position among the fruits of the State of New York, or even the United States. It is not intended at present to trench upon the magnificent industry as developed in the great State of California, where the Mission Grape, grown as it was, under the ban of illegality as soon as it began to make itself felt as an important competitor with Spain in its wine products, led the van, but more especially with reference to its rapid strides as a dressed fruit which our grapes have taken. One can still almost hear the lament of Nicholas Longworth over the wholesale destruction of his vineyards in the Ohio valley by the deadly black rot. It is yet common talk among our vineyardists, of Mr. Smith, of the firm of E. Smith & Sons, Geneva, N. Y., shipping a few grapes to New York city, *via* Erie canal, on a venture; how Mr. J. W. Prentiss, of Pultney, N. Y., shipped half a ton to New York, *via* express, packed in half-barrels with sawdust, the second shipment breaking the market past redemption. Both occurred in or about 1852. Mr. Prentiss was impelled to go to New York where, becom-

ing his own salesman, he procurred pasteboard boxes, and repacking the fruit from the half-barrels into the boxes, with one under each arm he started out to find a market. Dr. Grant of the Hudson Valley was also trying to convince the people of the value and the wholesomeness of this delightful fruit, and these men were sharp competitors for customers at that time. The Catawba has been tried and found wanting in most localities. Nothing seemed of much value except the Isabella. Some enthusiasts to whom all honor is due were working, either by hybridizing or from seedlings to get something better. The year 1854 brought out the Concord, pronounced the grape for the millions then, the prophesy holding good against all competition up to the present time. But little was done in the way of commercial planting until well along in the sixties. The grape filled a place then and has continued increasing its hold upon our people until the estimated output for the year 1892 for New York alone, is 120,000,000 pounds.''

RECENT PUBLICATIONS.

One of the most attractive catalogues of the season is that descriptive of the native North American ornamental plants offered by Harlan P. Kelsey of the Highlands Nursery, Linville, N. C. Typographically it presents more than the usual claim to attention. Several photo-engravings add much to its appearance. The list includes hardy American trees, deciduous ; hardy evergreen trees, hardy native evergreen and deciduous shrubs ; hardy native vines and climbers ; hardy native ferns, aquatics, bog plants and herbaceous perennials.

The *American Agriculturist* is preparing to publish the first number of volume 53. It is a standard authority upon agriculture and horticulture. Each volume presents 900 engravings. New York : ORANGE JUDD CO.

In the issues of November 9th and 16th the *American Florist* presented some excellent photo-engravings of leading varieties of chrysanthemums, samples from the great Chicago show. Some of the engravings were in colors.

One of the most complete publications of the kind is *The Gardener's Magazine* of London, Eng. Its reports of the proceedings of all the horticultural societies of the United Kingdom, are unexcelled for completeness and correctness. It is a compendium of the gardening events of the year. Its illustrations too are exact and of great value and interest.

The publishers of *Florists' Exchange* have purchased *American Gardening*, heretofore published by the Rural Publishing Co., and are now issuing it twice each month. The size of the journal corresponds to that of the old *American Garden* or *Popular Gardening*, 8½ x 12½ inches. The new journal retains the best features of the above papers with important additions.

To the Bancroft Company of Chicago, the world will always be indebted for the preservation, in the most elaborate form possible, by description and illustration, of the wonders of the World's Columbian Exposition of 1893. Few of the millions of visitors saw all that was presented, but by means of "The Book of the Fair" all the features of the Exposition may be studied at leisure. The work is on a plan commensurate with all the undertakings of the Bancroft Company. Part 1, comprising the first forty pages of the book contains a comprehensive account of the world's fairs of the past, covering the period since the first world's fair was held in London more than forty years ago, with incidental accounts of the fairs of all nations which are held annually, or oftener. There is an admirable historical sketch of the industrial, commercial and educational progress of Chicago by Hubert H. Bancroft who has so signally demonstrated his ability to preserve the history of a nation, state or city. Part 1 contains also the beginning of chapter three, which details the evolution of the Columbian Exposition. In part 2, the plan for getting the great undertaking under way is continued. The organization of the board of managers, the issuance of bonds, the advertisement of the Fair in this and foreign lands and finally the breaking of ground for the buildings are detailed. Chapter four describes the site, the plan and the artificers. This is one of the most entertaining features of the book. The reader here obtains a graphic description of the general plan and is conducted by a master hand throughout the Exposition. Due honor is paid to the department of horticulture as "one of the most attractive portions of the grounds." Appropriate mention is made of the great artificers through whose skill that most attractive feature, the conception as a whole, the uniform and consistent yet diversified plan in the arrangement of the building, was maintained. Chapter five has to do with the Exposition management, the Congress Auxiliary and finances. The illustrations in the book are profuse and invariably of the highest order of excellence. Chicago: THE BANCROFT COMPANY.

The transactions of the Massachusetts Horticultural Society deserve a place in every library. No similar society in the land is so well organized nor do the subjects discussed receive such admirable treatment as those presented by the members of this society. Part 1 of the proceedings of 1893 is at hand. The papers on "Village Improvement," "Landscape Gardening," "Historical Sketch of English Horticulture," "The Economics of Horticulture," Combating Fungous Diseases of Plants," "Wild Flowers and Ferns," "The Carnation and its Culture," "Poisonous Plants," "Aquatic Plants and their Culture" and "A visit to Japan" are essays on those subjects. Parts 1 and 2 of the transactions of 1892 are equally interesting The library of the society is very valuable. In the long lists of those who are and have been honorary and corresponding members are the names of many distinguished horticulturists in this and foreign lands. The society and the library are ably cared for by the secretary, Robert Manning.

In "Literary Industries," a memoir, by Hubert Howe Bancroft, there is presented a most interesting account of the life and work of the great historian. It is a record of the continuous efforts along a single line during thirty years, a history of the development of one of the greatest literary undertakings ever accomplished. The work describes the field covered; H. H. Bancroft & Co.; the transition from bibliopolist to bibliophile; the library and the literary workshop in which the author worked; the perils of publishing; historic researches in the south and north; his method of writing history, etc. The Bancroft library comprising 60,000 volumes is in scope, plan and purpose beyond comparison with any other American collection. It is made up exclusively of printed and manuscript matter pertaining to the Pacific states, from Alaska to Panama. It is a wonderful collection of historic data. The history of its acquirement and the manner of using it are detailed in this new book. Mr. Bancroft says "This volume closes the narrative portion of my historical series; there yet remains to be completed the biographical section." There is an excellent steel engraving of the historian and an introduction to the work by George Frederick Parsons. New York: HARPER & BROTHERS.

A marked advance in the style of a nurseryman's catalogue has been made by The Jewell Nursery Company of Lake City, Minn. The new catalogue of this company is a 7 x 10 book of 100 pages, with heavy book paper, upon which the illustrations and excellent letter press stand out with remarkable clearness. Four pages are devoted to the illustration by photo engravings of the exterior and interior of the company's buildings. The catalogue is the product of a western printing house ; it would do credit to the pretensions of the largest eastern concern. A large amount of matter, of interest both to nurserymen and planters is included within the pages.

FRUIT TREES IN THE NORTHWEST.

D. M. Holt of Wawawai, in a recent letter writes there were more fruit trees set out in the eastern part of the state last spring than any two spring seasons since the first settlement of the country, but reports with regret that trees are being sold by agents representing eastern nurseries at fabulous prices, in some instances double the price the trees can be bought for from reliable nurserymen in our own section, says the *Northwest Horticulturist*. The nurserymen here in the Pacific Northwest are sending out numerous canvassers. As a rule it is always best to get the plants as near home as possible; they should always be procured from the nearest, best home nursery where they can be had. Trees grown in the nurseries of Washington and Oregon are in many respects superior to trees grown in the states further east. This is a natural tree country, and at equal ages the plants and trees grown here are on an average more thrifty and larger than the former. Then again, the local grown trees are strictly watched by their owners for any injurious insect pests. A careful guard is being made to keep the insects which are injurious to the fruit growing industry here from spreading, because this is of the greatest importance to the home nurseries. A very rigid inspection will be made of all the imported nursery stock by the Board of Horticulture the coming planting season, and all articles infested will require a thorough disinfection before delivery. The coming two years will be a very critical period for the horticultural industry in the Pacific Northwest. If 50,000 acres are planted in the right proportions of the various varieties suited to the numerous local sections in the State of Washington, of good, healthy, clean trees, with proper care this will bring an annual revenue in from eight to ten years, of from fifteen to twenty million dollars; whereas, if the work is carelessly done and injurious insect pests are allowed to destroy the growing trees perhaps less than one-half that amount only will be realized.

Secretary Morton, of the Department of Agriculture, finds, according to his report, much that needs improvement in the methods of the department. Undoubtedly many of his conclusions are sound; but the department is one of the most important, and changes should be made with deliberation. He suggests that the experiment stations should be entirely divorced from the department, and the sum appropriated charged directly to them, or that the Secretary should have some power to direct and restrain their disbursements so as to insure legitimate expenditure of the same. He has, during the first quarter of the fiscal year, reduced expenditures in comparison with the corresponding quarter of last year by over $56,000. He gives the number of employes when he took charge as 2,479, and states that there are now on the pay-rolls only 1,994, a reduction of 503.

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Just the thing.—Geo. Peters & Co., Troy, O.
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Satisfactory; strong; stand heavy work.—Taylor, Peters & Skinner, North Topeka, Kan.

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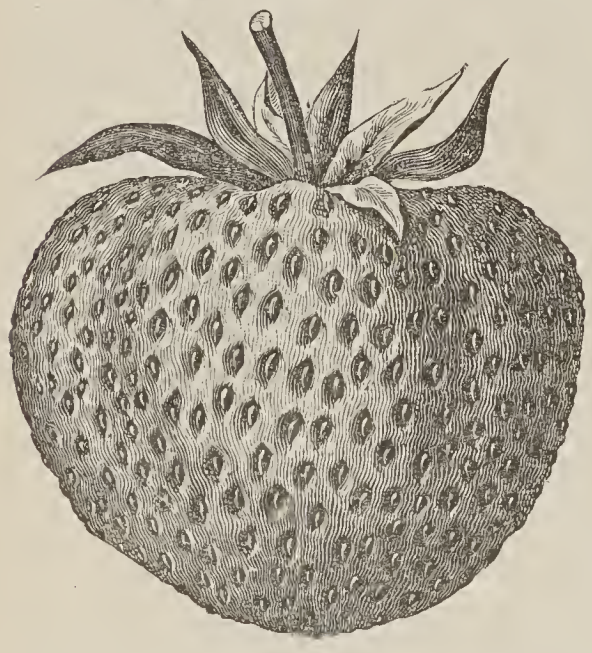
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The North Star Currant.

Plate No. 1.

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The National Nurseryman.

FOR GROWERS AND DEALERS IN NURSERY STOCK.

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DEPARTMENT OF AGRICULTURE RECEIVED DIVISION OF STATISTICS

VOL. I. ROCHESTER, N. Y., JANUARY, 1894. NO. 12.

ONTARIO FRUIT GROWERS' ASSOCIATION.

The annual meeting of the Ontario Fruit Growers' Association, held at Peterborough during the first week in December, while not characterized by a large attendance, was marked by the enthusiasm of the members present and the unbounded faith with which they viewed the future of fruit growing in the province. The address of the retiring president, A. H. Petit, was full of practical suggestions of great value to the fruit grower, and contained many interesting facts gathered while in Chicago in his capacity as Superintendent of Horticulture for Ontario.

Ontario succeeded in capturing thirty-eight out of a total number of sixty-five awards given to the Dominion for fruit. These awards covered the fruit products of 1892 and 1893.

Among the subjects which brought out a large amount of discussion and upon which much information was desired, was that of spraying for the prevention of fungous diseases and insect attacks. A satisfactory amount of evidence was given by practical fruit growers with regard to the efficacy of spraying practices in general. Some conflicting statements, however, were also made by fruit growers who claimed that success did not always attend their efforts. In most of these cases it was found that some of the minor details had been neglected in the operation of spraying, which had a vital effect upon the results obtained. It is a curious fact that while in the region of Rochester the practice of spraying for the prevention of curculio has been largely supplanted by the "jarring" method, yet, in the plum districts of Ontario spraying has given satisfactory results for a number of years and fruit growers now entirely depend on this remedy for saving their plums from curculio attacks.

Reports were received both proving and contradicting the statement that Bordeàux mixture would prevent the "cracking" and "spotting" of the Flemish Beauty pear, and so important a phase did this question assume that a resolution was adopted by the association asking for a series of experiments to be conducted by the horticultural division of the Dominion Experimental Farms for the purpose of demonstrating the possibility of treating this disease with financial success on a commercial scale.

The value of the fruit interests of Ontario were forcibly brought before the meeting by C. C. James, deputy minister of agriculture, who gave some figures with regard to the number of bearing and non-bearing trees of the different classes of fruits now planted in the province. The figures, which were unexpectedly high, represent such an amount of capital that it was a surprise to even the oldest fruit growers. They are as follows:

	1893.		1892.	
	OF BEARING AGE.	OF NON-BEARING AGE.	OF BEARING AGE.	OF NON-BEARING AGE.
Apples	$6,933,363	$2,144,681	$6,637,980	$2,200,944
Plums	682,561	680,094	659,454	683,415
Cherries	518,064	229,658	573,175	220,046
Pears	521,752	515,165	485,276	499,512
Peaches	521,873	386,330	443,100	434,554
Grapes	2,223,282	783,430	2,174,133	950,659

One of the features touching the trend of fruit growing at present brought out by discussion was the fact that fruit growers are now studying much more closely than in the past the capabilities of their soil and local surroundings and endeavoring to grow such fruits only as are best adapted to the conditions prevailing in their locality. In Southern and Western Ontario where grapes and peaches are successfully grown, the area under apples is decreasing, while Eastern and Central Ontario, where apples and pears are noted for their fine appearance and excellent flavor, these fruits are being largely planted and thus it is seen a greater adjustment of classes and varieties of fruits to local surroundings and environments is taking place.

The display of fruits included some very interesting hybrids by the late P. C. Dempsey, of Trenton, Ont., between Northern Spy and Golden Russet apples, and also between Sheldon and Duchess pears. Of the varieties of apples discussed, Ontario and Blenheim Orange received a large share of the praises accorded to the commercial sorts. It seemed, however, to be the experience of most of those who had grown the Ontario, that, while it is an apple of good flavor and good keeping qualities, yet, on account of its early and heavy bearing propensities it will need high cultivation and good care in order to extend its health and vigor long enough to carry it through a profitable life time. Many favorable reports were received of the Blenheim Orange, both in regard to the vigor of the tree, its productiveness and value as an exporting variety. Specimens of the Lawyer, or Delawàre Red Winter, of the crop of 1892 were exhibited.

On the matter of pears most of the discussion was along the line of winter varieties, and on account of the liability of the Flemish Beauty to "crack" and "spot," in the opinion of many, it was an unprofitable variety. Good words were spoken in favor of Buerre d'Anjou, Josephine de Malines and Lawrence.

A subject which occupied considerable attention and time of the association was the feasibility of establishing a

system of trial experimental stations throughout the province. A standing committee on experimental stations was oppointed some years ago and it has reported annually, thus far without being able to carry its scheme into operation, but the outlook now for the successful initiation of this work is much better than at any time past. In general, while the fruit year was not entirely satisfactory, yet prices kept up so well, that the financial returns in many cases were equal to those of former years and the outlook on the whole is a cheerful one. With a better appreciation of the adaptation of varieties to the conditions prevailing in the different sections of the province and a closer study of the laws governing the success of varieties, the Ontario fruit grower has many reasons for self-congratulation.

Ottawa, Canada. J. CRAIG.

W. N. Y. HORTICULTURAL SOCIETY.

The following subjects will be discussed at the annual meeting of the Western New York Horticultural Society, to be held in Rochester on January 24th :

"Grapes—New and Old"—George W. Campbell, Delaware, O.

"Are Novelties Worth Their Cost?"—Prof. L. H. Bailey, College of Agriculture, Cornell University.

"The Conservation of Moisture"—Prof. I. P. Roberts, director of College of Agriculture, Cornell University.

"The Art That Doth (not) Mend Nature"—Hon. Charles W. Garfield, Grand Rapids, Mich.

"Preservation of Fruits and Vegetables"—Dr. G. C. Caldwell, Professor of Chemistry, Cornell University.

"Rambling Thoughts on Horticultural Subjects"—Hon. J. H. Hale, South Glastonbury, Conn.

"An Informal Talk on Insects Injurious to Fruits"—Prof. C. V. Riley, Department of Agriculture, Washington, D. C.

"Experiments in Preventing Pear Scab, and the Leaf Spot of Plum and Cherry"—Prof. S. A. Beach, New York Agricultural Experiment Station, Geneva, N. Y.

"Our Fruit at the World's Fair. Some Lessons Learned"—George T. Powell, Ghent, N. Y.

"Plum Growing"—S. D. Willard, Geneva, N. Y.

"Cold Storage for Neighborhoods"—C. H. Perkins, Newark, N. Y.

"Some Fungous Diseases of Fruits and Their Treatment"—Illustrated with Lantern Slides—M. B. Waite, Special Agent of the Division of Vegetable Pathology, Department of Agriculture Washington, D. C.

"Work at the Experiment Station"—Dr. Peter Collier, New York Agricultural Experiment Station, Geneva, N. Y.

"New York Grapes at the World's Fair"—George C. Snow, Penn Yan, N. Y.

"Some Native Flowers for Garden Culture; Where to Get Them and How to Care for Them"—C. C. Laney, Superintendent of Parks, Rochester.

KANSAS HORTICULTURAL SOCIETY.

At the annual meeting of the Kansas State Horticultural Society at Holton, Kansas, on December 5th, the subject of whole or piece roots for apple grafts was discussed. Judge Wellhouse, the largest apple grower in the United States said the whole root graft is a fraud. In order to plant the young tree thus grafted it was necessary to dig down into the subsoil or else double up the root. The proper graft, he said, was a short piece root. The tree could be planted at a proper depth, one eye of the scion above the ground and the rest below. The main roots would then be formed from the scion and the tree would be on its own roots. Colonel U. B. Pearsall of Fort Scott, Kan., president of the American Association of Nurserymen, agreed in this statement, as did Mr. Willis of Franklin county. It was stated that one of the tricks of the trade was to pick out all the small, inferior roots that would not do to cut up for piece-roots and use them for whole-root grafts. The question was asked why nurserymen buy French apple seed, in preference to seed produced in this country. By concensus of opinion it was agreed that the French seed germinates and grows better, being specially prepared for nurserymen. The French seed is grown from the crab apple and contains more vitality than the apple seed. Seedling peaches throughout the state bore much better than the budded varieties. Trees and vines were reported in excellent condition, giving promise of a full crop next year.

NURSERYMEN DEMAND PROTECTION.

The annual meeting of the Western Association of Nurserymen was held in Kansas City on December 19th. Twenty-two firms were represented, embracing all the territory west of the Mississippi river except Texas, Louisiana, Colorado and California.

The following resolution was unanimously adopted :

"Resolved, That the members of the Western Association of Wholesale Nurserymen, whose membership represents firms and individuals growing the greater share of the nursery stock west of the Mississippi River, do hereby enter our earnest protest against the removal of any of the present duties upon foreign grown trees and shrubs, believing as we do that the American market should be reserved to be supplied by trees and plants grown by American labor employed at remunerative wages; that the secretary of this association be requested to send the senators from each state west of the Mississippi River a copy of these resolutions, and that he also furnish each member of this association a copy of these resolutions with the request that each member forward the same to the member of congress of his district accompanied by such additional protests as may be deemed best.

The following officers were elected: President, H. T. Kelsey, St. Joseph; vice-president, R. H. Blair, Kansas City, Mo.; secretary and treasurer, U. B. Pearsall, Fort Scott, Kas.; executive committee, G. J. Carpenter, Fairbury, Neb.; D. S. Lake, Shenandoah, Ia.; J. H. Skinner, Topeka, Kas.; E. P. Bernardin, Oklahoma City, I. T.; James A. Bayles, Lee's Summit, Mo.

The next meeting will be held in Kansas City, on the third Tuesday in June, 1894.

During last season about 4,500 car loads of fruit have been shipped from California, of which nearly 900 car loads went to New York and over 1,800 to Chicago.

TREES FOR CITY STREETS.

In response to letters of inquiry sent out by the Brooklyn Tree Planting Society regarding the best trees for city streets, the following letters have been received:

OLMSTED, OLMSTED & ELIOT.

BROOKLINE, MASS., September 13, 1893.

DEAR SIR:—I have received your letter of the 7th inst. Your society has undertaken an extremely difficult duty. I have frequently examined a long row of street side trees, not one of which failed to show the effect of serious above ground injuries, and it rarely occurs that such trees are planted under conditions below the surface of the ground that would justify an expectation of their long continued healthy growth. As a rule, they are practically set in little cups of soil, beyond the circumference of which their roots grow with difficulty and find but scanty nourishment. Consequently, they are of feeble constitution and fall a ready prey to insects and diseases. I must add that a considerable proportion of the trees planted in our cities are sooner or later killed outright by illuminating gas.

If you wish to see an illustration of the difference between trees fairly well planted and those planted under the direction of men not much more than usually well informed on the subject, compare those which are to be seen in Fifth avenue, New York city, with those to be seen on Fifty-ninth street adjoining the Central park. More than half of all the trees originally planted on Fifty-ninth street have died and been replaced by others. Many of them have been twice or thrice replaced. Of some hundred trees planted about twenty years ago on One Hundred and Tenth street and other streets bordering on Morningside park, New York, every one has died or been removed because of its diseased or dilapidated condition, and been replaced by another.

Not one tree in a hundred of all that may have been planted in the streets of our American cities in the last fifty years has had such treatment that its present condition can be supposed to indicate what a tree of the same species would come to be if properly planted and cared for.

For this reason I am not prepared to answer your inquiries with absolute confidence, but I am inclined to think that if, in the streets of Brooklyn, a sufficient amount of suitable soil could be provided and judicious management secured, satisfactory results would be obtained by planting the broadest streets and places with the first class in the accompanying list; the narrower streets with the second class, and the more confined places with the third class. I have observed all these except the buckeye growing less badly in Brooklyn than street trees generally do, and have formed my opinion of the buckeye from an observation of its growth in other places. I am, dear sir, yours respectfully,

FRED LAW OLMSTED.

Large trees—1. Platanus orientalis (Oriental plane). 2. Liquidambar styraciflua (sweet gum or bilstead. 3. Acer platanoides (Norway maple).

Medium trees—1. Æsculus glabra (Ohio buckeye). 2. Ulmus montana (Scotch elm). 3. Celtis occidentalis (nettle tree, hackberry).

Small trees—1. Acer campestre (English field or cork barked maple). 2. Koelreutera paniculata (koelreutera). 3. Cornus florida (flowering dogwood).

MT. HOPE NURSERIES.

ROCHESTER, N. Y., October 21, 1893.

DEAR SIR: In reply to yours of the 18th instant, we would state that according to our experience and observation the American elm is the best tree for street planting that we have; next comes the sugar maple, then the Norway maple. The elm is a very long-lived tree, always vigorous and healthy, generally free from insects, though in some places latterly the elm has been attacked by caterpillar. The maples are large growing, handsome, vigorous trees, with fine foliage, and can be specially recommended. The silver maple is very largely used as a street tree, and in soils where it does not grow too rankly is quite desirable; in fact, its rapid growth makes it very valuable, but it sometimes gets injured in storms and hence it has not the same value as the Sugar or Norway; still where one desires to have shade and rapid growth it is the tree.

Another tree now being used quite largely and valued on account of its rapid growth, is the Carolina poplar. It is a tall-growing tree and has very large, clean leaves, and makes a most remarkable growth. There is no tree that we know of that grows so rapidly and luxuriantly, and it is therefore especially valuable for immediate effects.

Regarding medium and small growing trees, we hardly think the lists can be arranged in the way you desire for street planting. In our opinion, for the street, large, tall-growing and spreading trees are needed. Now, if you insist upon a list of medium-sized trees, we would name as in the accompanying list; also for small-sized trees.

The cut-leaved weeping birch is a most beautiful tree for avenues and produces a unique effect, distinct and different from most plantings that we see nowadays. We know of one avenue planted in this way and the result is most satisfactory.

One of the most beautiful trees of recent introduction is the Wier's cut-leaved maple. We introduced this tree several years ago and the more we see of it the more we are impressed with its beauty. It is a variety of the silver maple; the branches droop gracefully to the ground; the foliage is deeply cut. Planted either singly or in rows as a street tree, it produces a most admirable effect. There are now in different places large specimens of this tree and they invariably command the admiration of all observers. It is a tree that cannot be too strongly recommended for planting in dooryards, around the lawn, in pleasure grounds, parks, cemeteries, in fact everywhere. Yours truly,

ELLWANGER & BARRY.

Large Trees—1. Ulmus Americana [American elm]. 2. Acer platanoides [Norway maple]. 3. Ulmus montana [Scotch elm].

Medium Trees—1. Tilia Europœa [European linden]. 2. Betula alba var pendula laciniata [Cut-leaved weeping birch]. 3. Acer dasycarpum var. Wierii laciniatum [Wier's cut-leaf silver maple].

Small Trees—1. Catalpa speciosa [Hardy catalpa]. 2. Acer platanoides var. Reitenbachi [Reitenbach's Norway maple]. 3. Æsculus hippocastanum var. rubicunda [Red flowered horse chestnut].

COMMERCIAL NURSERIES.

ROCHESTER, N. Y., September 11, 1893.

DEAR SIR: We inclose herewith your list of questions answered to the best of our ability.

The Lombardy and Bolleana poplars, though growing to a great height, are peculiarly adapted to narrow streets by their upright, spire-shaped habit of growth.

Yours truly,

W. S. LITTLE & CO.

Large Trees—1. Acer dasycarpum [Silver-leaved maple]. 2. Ulmus Americana alba [American white elm]. 3. Platanus orientalis [Oriental palm tree].

Medium Trees—1. Populus fastigiata or dilatata [Lombardy poplar]. 2. Liriodendron tulipifera [Tulip tree, whitewood]. 3. Sorbus aucuparia [European mountain ash].

Small Trees—1. Sorbus aucuparia var. quercifolia (Oak-leaved mountain ash]. 2. Salisburia adiantifolia [Gingko. maiden-hair tree]. 3. Populus alba var. Bolleana [Bolleana poplar].

GREATER interest should be taken by nurserymen in the meetings of the horticultural societies of the country. It is at those meetings that nurserymen may obtain valuable information concerning the wants of their patrons, the planters. There they may learn what varieties have proved during the season just closed best suited to a particular section; results of tests of new varieties are discussed and the prospect for the demand for certain stock may be noted.

THE CHRYSANTHEMUM.

It is but little more than a century since the nations of the West first became acquainted with the plant, but it is now almost as much of a craze in this country as travelers tell us it is in Japan. Exhibitions, of course, aid this, along with the florists, who grow such vast quantities and expose them in the markets in every considerable city. The single stem idea has much to do with this craze undoubtedly. Although chrysanthemums have been favorites like many other plants, no such furore existed until blossoms measuring from six to eight inches, and in rare instances almost a foot, in diameter were grown. In the fall of 1883 the first chrysanthemum show exclusively was opened in Horticultural Hall, Philadelphia, and from that time dates the new era. The idea spread, and Chicago a few years after, with other western cities, followed suit. The possibilities of the flower seem boundless. The perfection it has attained in new varieties and types seemed scarcely possible a few years ago, and there are men who thought themselves good judges who at that time thought the limit had been reached. But complete new forms are constantly springing up, and no one can say what the flower is not capable of producing under cultivation.

Charles E. Shea, the distinguished English cultivator and exhibitor of chrysanthemums says in an article in *The Gardeners' Magazine* on "The Chrysanthemum of the Future":

It is inevitable, when one institutes a mental comparison between the chrysanthemum of even so recent a period as half a dozen years ago and the chrysanthemum of to-day, that the mind should take flight into the realms of speculation, and endeavor to create in fanciful imagination some picture of the possible chrysanthemum of the future. We know with what giant strides has, in the immediate past, improvement followed on improvement in the chrysanthemum. One has but to look back to the list of "best varieties for exhibition" selected but a few years ago to realize how completely have the old standards of excellence passed away, and what a vast chasm separates these varieties from the magnificent productions of to-day. And is there any reason to suppose that we have arrived at a halting place in this matter? Surely no. In Europe and in America, not to speak of the old Asiatic homes of the chrysanthemum, enthusiastic amateurs, gardeners, and nurserymen are sparing neither brains nor money in seeking to further improve a flower which, at the present time, almost rivals the rose in popular esteem. What is to be the outcome of all these labors? A few stray speculations upon the subject may help to indicate some of the directions in which further improvements are most likely to be found.

In the first place, let us enumerate those qualities or attributes upon which the excellence of the flower must mainly depend. These are diameter, depth and solidity, form and character, and color. We may first deal with the question of diameter. What, then, has been the progress made during the last decade in this direction? One has but to turn to the earlier editions of Mr. E. Molyneux's work on the chrysanthemum to obtain a record of the standard dimensions of the exhibition varieties of the day. Then, six inches in diameter was more than the average of the "best twenty-four" Japanese. To-day we have *Etoile de Lyon*, *Viviand Morel*, *Sunset*, *Mrs. E. D. Adams*, *Primrose League*, *E. Molyneux*, and a host of other colossal varieties. What may be the maximum diameter attained with these varieties by skilful growers in various parts of the country I am not prepared to say, but, speaking for myself, the greatest diameter that I have achieved has been with *Sunset*. The N. C. S. "certificate" flowers, which I gave to Mr. Cannell, were, with petals extended, sixteen inches across. As I write, I have a bloom of *Primrose League* which measures in diameter on the plant, and without support, just eleven inches. In the direction of possible diameter in the future what limit can be placed, and at what date must the N. C. S. be compelled, by the exigencies of the situation to give practical effect to the resolution of its own conference on the "show-board" question, are speculations which may well present themselves to the mind.

Again, "depth and solidity." Take *Baronne de Prailly*, *et hoc genus omne*, where are they to-day as regards the show-board? And even *Meg Merrilies* and its golden sport are in the balance. Whether the excision of the lighter and, as some think, more graceful forms is altogether an advantage must remain a matter of taste, and *de gustibus non disputandum;* but the fact remains that the typical modern show bloom has attained such massive proportion in depth and solidity that improvement in this direction would seem almost less possible than in that of mere diameter.

Next "form and character." We have already the Japanese, the incurved, the reflexed, the various forms of the anemones, the pompons, the single, imbricated, fimbriated, multiform. We have the flat, strap-shaped petal, as in *E. Molyneux;* pendulous and twisted, as in *Boule d'Or;* erect, as in *Sarah Owen;* quilled, as in *Lilian B. Bird;* thread-like, as in *Alice Carter;* forked at the end, as in *Meg Merrilies.* Where, one would feel inclined to ask, does there appear room for a fresh departure in the direction of form and character of flower? But, nevertheless, we may safely aver that Nature has yet many a surprise in store for us, and that the chrysanthemum of the future may offer to the eye new forms of loveliness, even eclipsing those which her bountiful hand has already dealt out to us.

In "color," rich and manifold as are the hues which tint the royal robes of Queen Chrysanthemum, we were warned, even so late as the last season, by the advent of *W. Seward* and *J. Shrimpton*, not to be too hasty in assuming that we already possess the whole of Nature's floral color-box in our existing varieties of chrysanthemum. We have already some striped varieties, but in this direction, if existing specimens are to be our guide, it may be questioned whether any further progress is to be desired. But may we not hope to see combinations of colors within the same flower? I think so. But what of the "blue chrysanthemum"—the "Golden Fleece" of our floral world—can it be expected to expand its petals to our view? This question fitly leads us to the second aspect of our subject, the methods to be employed by those who are the *collaborateurs* with unconscious Nature in working out the problem of the creation and survival of the "fittest." Well, as to the "blue chrysanthemum," many experts aver that we must be content to "hope on, and hope ever," in vain. But the unlikely and unforeseen are not necessarily the impossible, and it is best, until the opposite shall be conclusively demonstrated, to accept nothing as impossible which is worthy of achievement.

How, then, may we hope to reach the blue chrysanthemum? Will it be by awaiting a sport? It is true that botanists are disposed to accept the conclusion that the primitive colors of flowers, and of the chrysanthemum certainly (chrysanthemum, the "Golden Flower"), was yellow; and it may be argued that, inasmuch as from this (or whatever the true) original point of departure other members of the floral kingdom have evolved blue flowers, why not the chrysanthemum? To this it must be answered that such a consummation may not be impossible; but it must be conceded that the progress, so far, in this direction has been very slow, for neither in sport nor seedling, so far as I am aware, have we yet recognized any tendency in the direction of a shade of blue. Certain fundamental colors appear to exhaust the potential of variation of the chrysanthemum, as of the rose, and in neither case is blue included in these colors. Within the limits of these fundamentals any combination would appear possible, and there are here alone abundant materials for fresh surprises for us, but I am inclined to the belief that if we are to attain to the blue chrysanthemum, we must look in other directions for the *fons et origo* of the wanted tint.

THE NORTH STAR CURRANT.

One of the most important of the small fruits is the currant. Its popularity is general, and none of the small fruits repays better a reasonable amount of care and attention. It is easily grown and therefore the stock is readily salable. But it would be strange, indeed, if with the marked improvement of recent years in all domestic fruit the currant should not have kept pace. That it has done so is proved by the handsome frontispiece presented with this issue, representing the North Star currant now coming rapidly into general use.

The desirability of securing a variety with the hardiness and vigor of the best and the requisite conditions of quality, size and productiveness of fruit, led to experiments which produced a new seedling, now known as the North Star. This seedling was selected from a large number by the originator, a skillful fruit grower, because of its wonderful vigor and growth.

The points of excellence are its hardiness, vigorous growth of wood, early fruiting and great productiveness. It may be unhesitatingly said that as the result of a test of several years, this currant represents to-day the highest results that have been attained with this fruit.

The North Star is undoubtedly an accidental seedling of the Victoria, with a test of nearly ten years. It is a vigorous grower, frequently making a growth of three feet in a single season, while it is perfectly hardy in any climate. The fruit is very uniform in size, of a bright red color, and is the sweetest and best flavored currant known. It is an early and prolific fruiter, many of the clusters measuring from three to five inches in length. The fruit is of a large size, larger than the Red Dutch or Victoria, rivaling the Cherry currant, and in field culture it will average fully as large a berry as the latter, while each bush will carry about double the amount of fruit. The North Star is much less acid, sweeter, and more agreeable to eat out of hand than any of the other varieties. The clusters are extremely long and densely packed with fruit, involving only half the labor in harvesting the crop. Again, the berries cling to the branches long after the fruit is ripe, so that one is not compelled to harvest the crop from the ground. This habit also lengthens the season of this currant from two to four weeks beyond that of any other known sort. This variety also has the faculty of holding its foliage until very late in the fall, thus aiding to develop the strongest possible fruit buds. It is never affected by borers and it is such a strong, vigorous grower that it is readily adapted to any locality. In order to get the best results it must be fertilized liberally. Where the grounds are limited its rapid growth renders it particularly desirable for cultivation in the tree form, as it requires but little pruning to keep it in that shape. To avoid a common annoyance a metal seal is attached to each plant of the North Star as a guaranty that the plants are genuine. This currant is propagated by one of the largest and most progressive firms in the West.

A PLEA FOR THE DEALER.

We know in theory it is right to buy of the producer or manufacturer direct, instead of through middlemen or agents, says a writer in *The Agricultural Epitomist.* We believe in it and practice it, when we are assured of fair dealing. But in practice we have found more of disappointment than of success. In buying of the middleman or agent you can see what you are getting before you pay, while in ordering direct it is usually pay in advance of shipment, and any claim for mistakes or damages is generally more trouble and expense than any amount to be received. If all men were honest then it would be the ideal method of doing business, but, as a rule, there is not that honesty that will give the stranger and distant buyer the same consideration as to a friend who is present. Then the goods that the farmer usually needs to order are perishable and easily damaged, and as he is likely to be some miles from freight and express office, he is at much trouble, even if everything is done promptly and fairly ; but, if not, he generally prefers to suffer loss rather than to spend time in getting redress. We have no favoritism to show to the fruit tree agent or "tree peddler," as he is slightingly called, but he has always treated us well, and we see no reason to shie a stone at him. He comes to your home, takes your order, delivers your trees on a certain day, of which you have due notice. You have your duplicate order and, if they are not there on time or not according to agreement, you do not have to take them, and you pay nothing until everything is satisfactory. We are at present twenty-one miles from railroad station, and extra trips are a serious burden. If all nurserymen or dealers were honest and trustworthy in every way and transportation companies were prompt in delivering goods, there would be much satisfaction in ordering from first hands, for a box of plants, generously sent us was packed in such a thorough manner and previous notice of shipment sent, that we received them just as and when expected ; and the same can be said of those received from one of our readers in our Riverdale home. Possibly the good wishes coming with them kept them warm and from freezing in mid-winter. But one of the high-priced novelties, and on which the expressage was thrice the first cost, is completely ruined, and no word from our letters of inquiry, though the loss was clearly from failure in packing, and a return the third time from the station without a fifty-dollar bill of trees makes us discouraged, and think that we will let the "tree peddler" take the risks. We are no more unfortunate than others, for we saw three other bills delivered that were completely dried out and utterly worthless. As to mail orders in seeds and plants we have fared better, as there is no delay in the route, though we lost one-third of one order by insufficient wrapping. If nurserymen and seedsmen want to have direct trade they must guarantee prompt delivery.

A Woodburn, Oregon, nurseryman lately placed an order for 20,000 prune trees.

CALIFORNIA FIGURES.

The *California Fruit Grower* says: "The St. Louis *Globe-Democrat* gives out some startling information about grape-growing in New York. The main objection to this as to most similar yarns found in the daily press is that it is not true. It claims that 50,000 acres devoted to grapes in Western New York constitute the largest grape-growing region in the world. It would seem that even the *Globe-Democrat* ought to be better informed than to print such bald nonsense as that. In order to further back up its statement the Missouri authority alleges that the New York crop will this year reach 8,000 carloads. This would indicate a total yield of 80,000 tons of grapes. Let us see if this is the greatest amount of grapes grown anywhere in the world, as alleged. California produces over 50,000,000 pounds of raisins and 15,000,000 gallons of wine each year. To make this amount of raisins requires about 75,000 tons of raisin grapes, and to produce the wine required, more than 100,000 tons of grapes. Besides this, table grapes are produced in this state to the amount of over 30,000 tons. Thus the annual yield of grapes in California is over 200,000 tons, or at least two and a half times as much as the *Democrat* gives for the State of New York. But even the immense yield of California is small compared with that of France or Italy. France annually produces about 650,000,000 gallons of wine, which requires 5,000,000 tons of grapes; or over sixty times the product of New York, and over sixteen times the combined product of New York and California. The amount of wine produced in Italy exceeds that made in France by an amount equal to five times the amount produced in the whole United States; hence it will be seen how ill-informed is our alleged great contemporary, and how valuable is such information telegraphed across the continent and printed in our innocent dailies in San Francisco. Altogether, therefore, we must conclude that the *Globe-Democrat* required its theatre reporter to produce something from his well fertilized horticultural imagination, and behold the result!"

ADVICE TO PLANTERS.

The *Michigan Farmer* gives this advice to planters: "The nursery agent may be a necessary evil to you, but if it is possible choose your own trees at a near-by nursery; if there is such. You have then the advantage of stock grown in a climate and soil like your own. If the agent is a convenience not to be ignored, deal with one who represents some well-known and reliable house—a house having a wide reputation for honest and fair dealing, and then take the trouble to not only carefully examine the agent's credentials, but to write to the house he claims to represent. Not every agent represents the firm he pretends he does; it costs only a two-cent stamp to verify his statements. The importance of good stock and true to name, cannot be overestimated in orchard planting, since one must wait so long for results and the harvest continues for years. In some respects it is better to order direct from a well-established nursery firm than to trust any agent. Don't buy even a gooseberry bush of an agent who can furnish you a blue rose, a tree strawberry, or any other horticultural monstrosity. You will furnish the 'goose' part of the transaction if you do. Put him down as a humbug on general principles."

J. A. Roberts, of Malvern, Pa., writes: "The year 1892 was not one in which a large crop of peaches was produced; in fact in some localities in the peach districts there were but few. A belt of evergreens afforded much protection. On the south side of a belt of tall evergreens peach trees bore so heavy a crop that limbs were broken by the weight. In unprotected parts of the orchard but few were secured."

In New York and the New England states much planting is done in the fall, says an exchange. But in the prairie states it is never advisable. If not wholly killed by our drying winds of late fall, winter and early spring, they are so lowered in vitality as rarely to become useful. As a rule nurserymen favor fall planting for the reason that it extends the sale season. But it will be noticed that those who advise this never practice it on their own places. At the West we have another reason for avoiding fall planting where the trees are distributed by dealers. The trees are taken up so early in the fall that the leaves must be stripped before their work is completed or perfect ripening of the wood. Trees thus prematurely stripped have little value even when properly buried for spring planting.

Among Growers and Dealers.

George M. Sweet of Dansville, went to California on December 15th. He will spend the winter there.

William H. Dyer of Providence, R. I., is closing up his nursery business, preparatory to retiring in the spring.

The nurserymen of the country may save postage by knowing that there is but one nursery at Arlington, Reno county, Kansas, the Arlington Nursery, owned and managed by B. P. Hanan. The nurserymen have been sending circulars to B. P. Hanan, B. F. Hanan, P. B. Hanan, B. P. Hannon and J. B. Harmon, according to the variations of their lists.

In the nursery department of the World's Columbian Exposition, first honors were awarded D. Hill, evergreen specialist, of Dundee, Ill., whose exhibit of hardy evergreens was the admiration of all who viewed it. It consisted of over six thousand evergreens, of forty different varieties, planted in a most artistic and pleasing manner. This exhibit was complete in both design and varieties. Mr. Hill is sending his patrons a souvenir evergreen which besides being a novelty, will stand as a living monument in commemoration of the World's Columbian Exposition.

GEORGE ELLWANGER.

It is with more than usual pleasure that we present with this issue a likeness of the senior member of the pioneer nursery firm in America, Ellwanger & Barry. Mr. Ellwanger is the oldest nurseryman in the country. He and his distinguished co-laborer, the late Patrick Barry, more than half a century ago established a business which has extended from coast to coast and has led to the investment of large sums of money in broad acreages. Fifty-four years ago Mr. Ellwanger, who as the son of influential parents in Germany, had acquired a love for plants and flowers, came to America in search of native plants. As he passed through New York State on his way to Ohio he was greatly impressed with the beauty of the Genesee country. He returned to Western New York and determined to develop the great possibilities of fruit culture which he was quick to perceive this country afforded. In 1838 Messrs. Ellwanger and Barry set out together to create and supply a demand for fruit. They selected their stock in Europe by personal visits to France and Germany, shipping the stock to this country in sailing vessels. The nursery comprised seven acres at first and was on the site of the present extensive establishment. The climate and soil in this section led to its selection for this purpose. So successful were the efforts of this firm that it sold not only all its own trees, but also all that could be raised by others in the vicinity. Fruit growers and nurserymen who started in business in the West came to this firm for specimen trees. Ellwanger & Barry established large nurseries in Columbus, O., and Toronto, Canada, and sold them. After producing a brisk trade in fruit trees this firm created a demand for ornamental stock which increased rapidly. From the pioneer days to the present time the firm has kept pace with the wonderful progress in fruit and ornamental tree culture, much of which has been the direct result of its efforts. The Mount Hope nurseries comprise over 500 acres. They are the most complete in the world. There are others that cover more territory, but none in which the various species of fruit and ornamental trees, shrubs, vines and plants are so fully and so well represented.

In daily attendance upon the duties of the business which his close and constant observation has done so much to build up, Mr. Ellwanger stands at the head of one of the most important industries of America, ably assisted since the death of Patrick Barry, on June 23, 1890, by the latter's son, William C. Barry, the best known and most prominent of the younger nurserymen and horticulturists of the country.

Well may the trade honor and respect the venerable gentleman who taught the first principles of the business and whose activity has kept at high mark the aim which others have sought. Mr. Ellwanger is one of Rochester's most prominent citizens. He is a director of the Trust and Safe Deposit Company, a director of the Flour City National



GEORGE ELLWANGER.

Bank and a trustee of the Monroe County Savings Bank; he is also interested in a large amount of valuable real estate in the center of the city. He is a thoroughly practical nurseryman, understanding every detail of the business.

PEACHES ON PLUM STOCK.

Moses Price of Smyrna, Delaware, recently pulled from a tree growing in his side yard two large highly colored peaches resembling the Reeves variety, but clingstone in character. Now there is nothing remarkable in plucking two fine peaches from a tree, but there is something worthy of note to fruit growers in the fact that they did not grow on a peach but plum stock. The bud was taken from a seedling that grew up at the side of a pig pen and bore very fine peaches, but died before the tree matured because, it is thought, of too much stimulating manure. There is another interesting feature about this plum tree bearing peaches. It bore this year four varieties of fruit which he had budded into it—plums, cherries and besides the peaches above named, an earlier budded and large limb bore some very nice peaches of the Mountain Rose variety. Here would seem to be a hint to our nurserymen. If Mr. Price can grow fine peaches on plum stock, why can't they, and thus, in a measure, defy the devastation of the yellows?—*Boston Fruit and Produce Journal.*

According to the *New England Farmer* several pear trees in the suburbs of Boston more than 200 years old are still bearing fruit.

The National Nurseryman.

C. L. YATES, Proprietor. RALPH T. OLCOTT, Editor.

PUBLISHED MONTHLY BY
THE NATIONAL NURSERYMAN PUBLISHING CO.,
305 COX BUILDING, ROCHESTER, N. Y.

The only trade journal issued for Growers and Dealers in Nursery Stock of all kinds. It circulates throughout the United States and Canada.

SUBSCRIPTION RATES.

One Year, in advance.....$1.00
Six Months.....50
Foreign Subscriptions.....1.25
Six Months.....75

Advertising rates will be sent upon application. Advertisements should reach this office by the 20th of the month previous to the date of issue.

Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

Entered in the Post-Office at Rochester, N. Y., as second class matter.

ROCHESTER, N. Y., JANUARY, 1894.

AFTER A YEAR'S TEST.

WITH this number THE NATIONAL NURSERYMAN closes the first year of its existence. Its publishers have much cause for congratulation. In its wake have followed in increasing ratio the highest testimonials as to its character and worth. It has been pronounced an unequalled medium for the transmission of matter of interest to the trade and the presentation of the offers and demands of advertisers. It is strictly a trade journal and as such has received the hearty endorsement of the leading nurserymen of this country and Europe, as well as the approbation of all. It was found that a number of men nominally in the nursery business had not the spirit of progress which leads the successful ones to embrace readily an opportunity to become thoroughly informed on matters of great importance to them, but these are few.

The new year offers much for the nurserymen of the country to consider. The marked changes which have affected all kinds of business during the year just closed call for earnest thought and diligent application with a view of meeting successfully new conditions. There is a prevailing opinion that with the opening of another season the effect of better prices will be felt; at least that a beginning on the road to recovery will be made. What the new year may have in store cannot be foretold, but no nurseryman can make a mistake in procuring literature that applies directly to his trade. In this way only can the widely scattered interests of the business be brought together for the information of each and the benefit of all.

A trade paper has been given to the nurserymen. It is the duty of each individual in the trade to support what he must himself admit is the right thing in the right place; a declaration which has been made voluntarily by a hundred leading nurserymen, and oftentimes repeated.

THE EXPERIMENT STATIONS.

There has been considerable criticism of Secretary Morton's opposition to the continuance of the appropriation by the Department of Agriculture of $15,000 a year to each state in which there is an experiment station. But the position of the secretary seems to be tenable. He argues that the appropriations should cease, because the government can at present in no way control the expenditure of that money. He believes that much of it has been wasted by the duplication of experiments and the lack of system. Agricultural colleges were established during the war when congress apportioned 1,680,000 acres of government land among the states for the endowment of these institutions. In the West especially these colleges proved both useful and popular. In 1875 an agricultural experiment station was established in Connecticut. It was very successful. During the next seven years six other stations had been established in as many states. In 1887 congress made an appropriation of $15,000 to each state owning an experiment station. This lead to a rapid increase in the number of stations and at present there are 54, some states having two or three. In these are employed 500 persons and the cost per year is $1,000,000.

Undoubtedly much has been wasted by the present plan of managing the stations. They have been conducted independently, have duplicated each other's work and have devoted much time and money to that which might have been regarded at the outset as useless. For these reasons the government should control the stations and the expenditure of the appropriations, or it should not contribute to them at all.

In the interests of horticulture and, therefore, of the nurseryman, the experiment station can do much. The station can do work which requires continuous investigation extending over a series of years and this the nurseryman or the fruit grower has not time to do. The people are learning that science is the only sure foundation for horticulture.

THE MIDWINTER FAIR.

The enterprise of the Pacific coast is well illustrated in the production by the Californians of a Midwinter Fair. It has been thought in the East that this would be a small affair, almost entirely local in character. But this opinion is not based upon a knowledge of the facts. Planned upon a liberal scale, with buildings that are architecturally and in extent at once imposing and adequate to a large display, the exhibition itself promises to be practically international

in character and to cover every variety of form and production. Many of the best exhibits of the Chicago Exposition have been received, and there will be a large and remarkable display of the resources of the Pacific slope, from Alaska, Europe and the Oriental countries. One of the features will be a typical California mining town of '49, with the chief buildings and characters. More than 100 people will be attached to the town, and these will include a band of Indians. In the regular mining department there will be an elaborate display of the working of deep silver-mining on the Comstock Lode, which has never been attempted before. A gilt sphere, nineteen feet in diameter, will represent the weight of the $1,300,000,000 that the gold mines of the state have added to the world's wealth in fifty-five years. The methods of the placer and hydralic miners will be illustrated by actual working models of mines. The site for the exposition in Golden Gate Park includes one hundred and sixty acres and is easily accesible from all parts of the city. The park covers nearly eleven hundred acres, and is one of the most beautiful pleasure-grounds in the world. Its length, from the main entrance westward, is four and a half miles. Its drive-ways are sixty feet wide, and are bordered by bridle-paths the entire distance.

But chief among the exhibits of course will be those of the horticultural department, for in the commercial world California's crowning glory is her fruit. The building devoted to horticulture and agriculture has an imposing entrance, massive and beautiful in design. There is an immense dome in the centre of the building similar to that at the World's Fair.

The formal opening of the Midwinter Fair announced to take place on January 1st was postponed on account of delay in receipts of foreign exhibits. It is expected that by February 1st the fair will be well under way.

SUBSCRIPTIONS EXPIRE.

With this issue of THE NATIONAL NURSERYMAN subscriptions for the year 1893 expire. These should be promptly renewed, for the journal will be more valuable than ever during the present year. No expense or labor will be spared to maintain its position as the leading exponent of the nurserymen's trade. A glance at the list of articles presented in the index of Volume I. in this issue, will give an idea of what has been furnished the literature of the trade by this journal during a single year. No nurseryman can afford to be without this simple and effectual means of informing himself upon those matters which directly concern his business.

Prompt payment of subscriptions will insure the success of an undertaking which has been welcomed most heartily. The new year begins with the February number.

CAUSE OF DELAY.

Owing to an accident in our art printing department this issue was delayed ten days.

WHAT NURSERYMEN THINK

OF THE ADVANTAGES AFFORDED BY A TRADE PAPER DEVOTED SOLELY TO THE INTERESTS OF GROWERS AND DEALERS IN NURSERY STOCK—VOLUNTARY EXPRESSIONS OF REPRESENTATIVE NURSERYMEN—ALL SECTIONS JOIN IN COMMENDATION —A FEW OF THE MANY ENDORSEMENTS.

It is the desire of the publishers of THE NATIONAL NURSERYMAN to let the merits of the journal speak for themselves generally. Each number portrays by its exceptionally fine line of advertisements its value as a medium of communication between buyer and seller, and its news columns have been supplied by the leading men in the business. These facts proclaim its popularity.

Nothing further would be added were it not that at this time, when the congratulations of the season are being so bountifully bestowed, it would seem appropriate to present a few of the many unsolicited endorsements which have come from all sections of the country :

THE RIGHT THING.

H. J. WEBER & SON, NURSERY P. O. MO.,—"Inclosed please find $1.00 in payment of subscription to THE NATIONAL NURSERYMAN. The nurserymen have long been in need of a journal to take up our interests and we are positive that THE NATIONAL NURSERYMAN is the right thing in the right place. We wish you unbounded success in your undertaking."

THE BEST ADVERTISING MEDIUM.

THE FARMERS' NURSERY CO., TADMOR, O.—"We have already sold most of our surplus stock for spring '94. At a seasonable moment for advertising for fall '94 we will write for rates as *we consider you have the best advertising mediu n for nurserymen.* The feature of striking out the prices is a good one for the nurserymen as well as yourselves. The information in any issue of the journal is worth far more than the price of subscription. Yours for a Merry Christmas."

A LONG FELT WANT.

CHEROKEE NURSERY CO., WAYCROSS, GA.—"Enclosed you will find $2.00 one of which you may credit to our last year's subscription which was sent to Reed & Co., and the other dollar you may place to our credit on the coming year's subscription, which you may send to the Cherokee Nursery Co. We hope that the paper will meet with success as it is a long felt want to the nurserymen."

CAN'T AFFORD TO DO WITHOUT IT.

B. P. HANAN, ARLINGTON, KAN.—"I cannot afford to do without so good a journal as THE NATIONAL NURSERYMAN, nor do I think any nurseryman can. Enclosed find $1.00."

APPRECIATES THE CONTENTS HIGHLY.

A. PULLEN, MILFORD NURSERIES, MILFORD, DEL.—"I appreciate highly the contents of each issue of your publication."

RECOGNIZES ITS VALUE.

THE SMITHS' NURSERY CO., NEW CARLISLE, O.—"We recognize the value of your publication as a medium to reach the legitimate nursery trade, and we expect to use same in the near future. We courteously solicit your correspondence at all times."

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GEORGE G. ATWOOD, GENEVA, N. Y.—"Let me take occasion to thank you for your excellent paper and to commend your enterprise in the presentation of such valuable features as you bring out so satisfactorily. Success to your efforts."

HIGHLY PLEASED.

JOHN S. BARNHART, DENTON, MD.—"I am highly pleased with your efforts to benefit the trade. I consider it my duty to

give you my support. Enclosed find $1 for subscription. I shall use your columns for advertising my stoek. Your policy of withholding wholesale priees from public gaze is commendable."

CAN'T AFFORD TO MISS IT.

P. A. ATKINS, PLEASANT LAKE, MASS.—"Have not received my NATIONAL NURSERYMAN this month. I would sooner part with my hair than this. Please send it—I can deny myself no longer."

PROMISE OF A BRIGHT FUTURE.

M. J. GRAHAM, ADEL, IA.—"I have had value received from every number of your journal. I enclose subscription price. There is room for your journal and it gives promise of a bright future."

RECENT PUBLICATIONS.

Volume I. of the two-volume edition of the Funk & Wagnalls Standard Dictionary of the English language has been issued. This volume has been four years in making; two hundred and thirty-eight editors and specialists have been employed upon it; and the cash outlay has been about a half million dollars. The advance orders for the work mount up into the tens of thousands. This dictionary was granted a diploma at the World's Fair. The vocabulary of the Standard is extraordinarily rich and full, that of no other dictionary nearly equalling it, although great care was taken to throw out all useless words. The full number of words and terms in the several dictionaries for the entire alphabet is as follows: Stormonth, 50,000; Worcester, 105,000; Webster (International), 125,000; Century (six volumes, complete), 225,000; Standard, 300,000.

Number 1 of Volume IV. of "Insect Life," published by the Department of Agriculture, continues the interesting notes which have made this publication of so much value and interest.

In Part III., of "The Book of the Fair," the description of the exposition management, congress auxiliary and finances is concluded. Chapter VI. follows with a detailed description of the dedication and the opening, including the famous naval review. The work of describing the buildings is then taken up. Naturally the government and the administration department are the first to be treated. In general and in detail these branches of the work are executed with the same care and on the same magnificent scale which characterized the other parts of the book. The illustrations are chosen with a view of preserving the beauties of the Exposition, most of which have already vanished, thus making "The Book of the Fair" already of great value. In the production of this book Mr. Bancroft increases the debt of obligation under which he has laid the generation by his priceless series of historical works. Chicago: THE BANCROFT COMPANY, Auditorium Building.

CATALOGUES RECEIVED.—Boskoop, Holland, Nursery Assoeiation; D. Dauvesse, Orleans, France; William Parry, Parry, N. Y.; Barbier Brothers & Son, Orleans, France, represented by Knauth, Nachod & Kuhne, New York; The Bellevue Nursery, Wm. F. Bassett & Son, Hammonton, N. J.; F. R. Pierson Co., Tarrytown-on-Hudson, N. Y.; Portland-Pearmount Nursery, Pilkington & Co., Portland, Ore.; Michel Plant and Bulb Co., St. Louis, Mo. Cleveland Nursery Co., Rio Vista, Va.; A. T. Cook, Hyde Park, N. Y.; Lewis Roesch, Fredonia, N. Y.; The Bloomsdale Nurseries, Woodstock, Ont.; Kennesaw Wholesale Nurseries, Marietta, Ga.; F. Van Exter, Gendbrugge-Ghent, Belgium; Kansas Home Nursery, A. H. Griesa, Lawrence, Kan.; W. Atlee Burpee & Co., Philadelphia; J. M. Thorburn & Co., New York City; Oscar Knopff & Co., Erfurt, Germany. Kelway & Son, Langport, England; George S. Josselyn, Fredonia, N. Y.

Joseph Meehan recommends the top-grafting of apple trees instead of the root-grafting process by which most nursery stock is produced. This is especially important for the Baldwin apple, which is somewhat tender, and does better when grown on other roots than its own.

From Various Points.

Thirty-one hundred car-loads of grapes were shipped from the Chautauqua district last year, of which the Grape Union shipped 1,837.

Irving A. Wilcox of Portland, N. Y., and S. S. Crissey of Fredonia, N. Y., have been elected president and secretary respectively of the Chautauqua County Horticultural Society.

The Michigan State Horticultural Society has elected these officers: President, Roland Morrill, Benton Harbor; secretary, Edwy C. Reed, Allegan; treasurer, Evart H. Scott, Ann Arbor; executive board, C. W. Garfield, Grand Rapids; Fred J. Russell, Muskegon; and T. T. Lyon, South Haven.

At the twelfth annual meeting of the American Forestry Association in Washington, December 15th, Secretary of Agriculture Morton, was re-elected president; Dr. H. M. Fisher, treasurer; B. E. Fernow, chairman of the executive committee, and J. D. W. French, secretary pro tem. Upon invitation of Colonel W. F. Fox, forest warden of New York, the association will hold a meeting in Albany this winter.

A California paper says: "Wineries are running night and day and crushing a vast amount of grapes. The Los Gatos Co-operative has contracts for 3,000 tons; the Saratoga and Los Gatos Wine and Fruit Company 1,000 tons, and the California Grape Food Company for 2,000 tons (mostly Zinfandel and Muscat), to say nothing of the grapes used in the small wineries scattered through the mountains and foothills. The yield of grapes was fully up to the average and prices range from $9 to $10 per ton."

At the 24th annual meeting of the Southeastern Iowa Horticultural Society on December 5–7, the following officers were elected: C. L. Watrous, Des Moines, president; W. H. Hoopes, Muscatine, vice-president; C. W. Burton, Cedar Rapids, secretary; W. M. Green, Davenport, treasurer. Directors—1st district, W. S. Fultz, Muscatine; 2d district, D. F. Bruner, Toledo; 3d district, E. A. Branson, New Sharon; 4th district, H. Schroeder, Sigourney; 5th district, T. L. Lunckenbill, Huron; superintendent of exhibits, Jonas Miller, Wapello.

The New Hampshire State Horticultural Society has been organized at Manchester, N. H., with the following officers: President, C. C. Shaw, Milford; vice-president, J. W. Farr, Littleton; secretary, W. D. Baker, Quincy; treasurer, Thomas E. Hunt, Gilford; directors, George F. Beede, Rockingham county; J. M. Haynes, Stratford county; J. L. Davis, Belknap county; E. M. Shaw, Hillsborough county; Harvey Jewell, Cheshire county; J. T. Harvey, Merrimack county; Thomas F. Pulsifer, Grafton; Charles McDaniel, Sullivan county. The annual meeting will be held in October, 1894.

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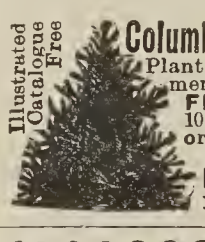
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Standard Pears, 2 years, 6 to 7 feet.
" **Plums**, 2 years, 5 to 7 feet.
Dwarf Pears, 2 years, 4 to 5 feet, extra.
Russian Apricots, (on Plum) 2 years, 4 to 5 feet.
Quinces, Champion, Meech's, Orange, 4 to 5 feet.
Currants, 2 years, Cherry, Fay's, Prince Albert, White Grape.
Currants, 2 years, Black Champion, Lee's Prolific.
Grape Vines, 2 years, Diamond, Eaton XX, Ulster, Worden, Champion, Pocklington, Lady, Vergennes, &c., &c.
Gooseberries, 2 years, Downing 3c., Industry 8c., White Smith 8c.
Raspberries, Cuthbert, Marlboro, Rancocas, Reliance, Caroline, Golden Queen, Hansell, Gregg, Mammoth Cluster, Ohio, Schaffers, &c.
Cutleaf Birch, 9 feet, Oakleaf Mountain Ash, 8 feet, Tulip Trees, 7 feet, Maple Schwerdlerii XX, 6 feet, Maiden Hair, 8 feet, Russian Mulberries, 7 feet, Magnolia ac., 4 feet, Strawberry Trees, 4 to 7 feet, Purple Beech, Purple Filbert, Purple Berberry, all fine plants.
Azalia, Cornus ele. variegata, Tree Pæonias.
Shrubs, in variety, fine plants, low prices.
Clematis, Coccinia, Crispa, Paniculata, Jackmanii, and other large-flowered kinds.
Akebia, American Ivy, Bignonia, Dutch Pipe, Honeysuckles in variety, Wistarias, double and single.
Roses, H. P's, Mosses, &c., on own roots and budded.
Tree Roses, fine plants, Rhododendrons, Ghent Azaleas, &c.

WRITE FOR PRICES.

JOHN CHARLTON, = Rochester, N. Y.

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HEAVY DIGGING SPADES, PLANTING DIBBLES, FINE PRUNING, GRAFTING AND BUDDING KNIVES, PRUNING TOOLS OF ALL KINDS. TREE LABELS, BOX STRAPPING, &C. . . . . .

Send for Illustrated Catalogue and Price List.

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C. F. McNAIR & CO.,

Wholesale Nurserymen, Dansville, N. Y.

Fruit Trees a Specialty.

20,000 Apple Trees in Surplus for Spring Delivery, 1893. Leading sorts.

Write for prices, &c. Correspondence solicited.

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BOOKBINDERS,

Nurserymen's Work a Specialty.

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SPECIAL OFFER of Choice Fruit and Ornamental Trees, . . . Shrubs, Vines and Roses,

FOR SPRING DELIVERY, 1893.

In order to reduce our **surplus** we offer the following stock to wholesale buyers at **special rates** for the next thirty days:

10,000 Standard Apples, first-class $\frac{3}{4}$ in. and up, general assortment leading kinds.
1,200 Crab Apples, first-class, $\frac{3}{4}$ in. and up, general assortment, leading kinds.
10,000 Standard Pears first-class $\frac{3}{4}$ in. and up.
10,000 " " " $\frac{5}{8}$ to $\frac{11}{16}$, 5 to 6 feet.
5,000 Dwarf Pears, first-class, 2 years. largely Duchesse.
10,000 Plums, on Plum, first-class, $\frac{3}{4}$ in. and up, 2 and 3 years, European varieties.
5,000 Plum, on Plum, $\frac{5}{8}$ to $\frac{3}{4}$ in., 4 to 6 feet, European varieties.
1,000 Champion Quince, first-class, 2 years, 4 to 5 ft.
GRAPE VINES, first-class, 2 and 3 years. 1,000 Amber Queen, 10,000 Brighton, 2,000 Empire State, 1,000 Hartford Prolific, 500 Lady, 3,000 Moore's Diamond, 1,000 Niagara, 500 Vergennes, and other choice varieties.
500 Cut-leaved Weeping Birch, 5 to 6 feet, fine.
300 Magnolia Speciosa, 4 to 5 ft., choice.
500 Maple, Wier's Cut-leaved, 7 to 8 ft., extra.
100 Weeping Mountain Ash, 2 year heads.
200 Mulberry, European, white or black, 6 to 8 feet.
300 " Russian, 6 to 7 feet.
300 Double-flowering Thorn, red and white, 3 to 4 ft.
300 Austrian Pine, 3 feet.
1,500 Clematis, large-flowering; 300 Elder, golden-leaved.
1,000 Honeysuckle. Hall's Japan; 100 Chinese Matrimony Vine.
200 Hydrangea, Red Branched.
5,000 H. P. and Moss Roses, 2 years, *on own roots*. Chinese varieties.

☞ All the above is offered at low rates to cash buyers. Write for prices, stating quantities wanted.

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We are in want of the following either for cash or in exchange for above.

40 Clethera Alnifolia, first-class, 3 feet.
25 Clematis Davidiana, strong dormant plants.
30 Exochorda Grandiflora, 3 feet.
70 Honeysuckle, Red Tartarian, 3 feet.
1,000 Hydrangea, Paniculata Grandiflora, 3 to 5 feet.
65 Ivy American, strong plants.
40 Kervia Japonica, double-flowering, $2\frac{1}{2}$ to 3 feet.
50 Pæonia, white.
25 Purple Fringe, 3 to 4 feet.
30 " Berberry, 2 to 3 feet.
75 Rhododendron, hardy, 2 to $2\frac{1}{2}$ ft., pink, red and white.
25 Snowball, $2\frac{1}{2}$ to 3 feet.
40 Spirea, Golden, $2\frac{1}{2}$ to 3 feet.
25 " Van Houtte, $2\frac{1}{2}$ to 3 feet.
100 Viburnum Plicatum, $2\frac{1}{2}$ to 3 feet.
300 Wiegelia, Variegated.
50 " Candida.
500 Japanese Wineberry, first-class.
500 Industry Gooseberry, 2 years, first-class.

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WOODLAWN NURSERIES,

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Growers of Small Fruit Plants.

Special attention given to furnishing Nurserymen with all kinds of

TRANSPLANTS ON CONTRACT.

☞Now is the time to send in your list that you want grown on contract for Fall of '93 and Spring of '94.

We offer for the Spring-of '93, the largest and most complete collection in the United States of high grade small fruit plants.

Special attention is directed to the following :

Raspberries—Brandywine, Brinckle Orange, Cuthbert, Clark, Hansell, Herstine, Johnson Sweet, Kansas, Lovetts, Mammoth Cluster, Marlboro, Ohio, Palmer, Rancocas, Souhegan, Shaffer's Col., Tyler, Thompson Early, Japan Wineberry, etc.

Blackberries—Agawam, Bangor, Early Cluster, Early Harvest, Erie, Stone Hardy, Kittinney, Lawton, Lucretia Dewberry, Minnewaska, Snyder, Taylor, Wachusett, Wilson Early, Wilson, Jr., etc.

Currants—1 and 2 years extra good. Black Naples, Cherry, Champion, Red Dutch, Fay's Prolific, LaVersailles, Lee's Prolific, North Star, White Grape, etc.

Gooseberries—Downing, Golden Prolific, Smith's Improved, Triumph, etc.

Strawberries—All of the best New and Old varieties. Also potted plants. We can send your Strawberries by mail or pack them in Burlaps (as your order calls for,) and put your tag on them.

Asparagus—800,000 2 years Conovers and Palmetto. Get our prices before ordering.

Rhubarb—100,000 1 and 2 years Myatt's and Victoria. All grown from seed: extra fine plants.

☞**For Miscellaneous stock send for Wholesale Catalogue.**

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FOR SPRING, 1893,

Contains all the most valuable trees and plants required for filling first-class orders.

In Apples and Peaches our stock is remarkably fine.

THE DEPARTMENT OF HARDY SHRUBS

is one of the largest in the country, and embraces such valuable kinds as

HYDRANGEA PANICULATA GRANDIFLORA, DEUTZIA GRACILIS,
EXOCHORDA GRANDIFLORA, CYDONIA JAPONICA,
WEIGELIA ROSEA, VARIEGATA, ETC., ETC.,

in Large Lots.

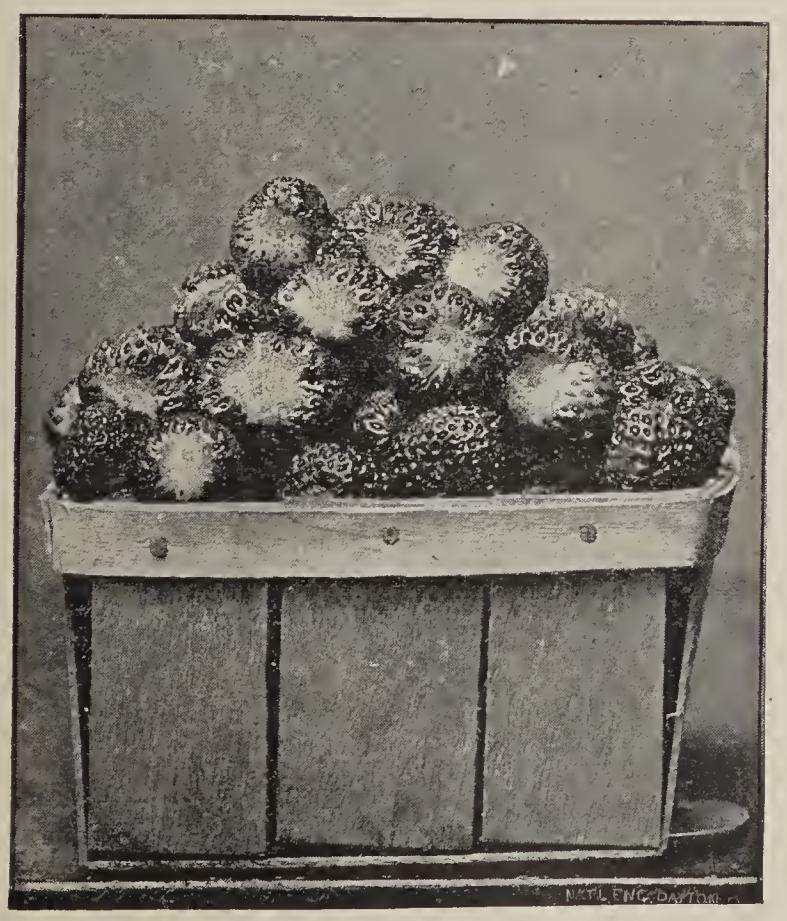
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Ornamental Grasses by the 100 and 1000 at . . . . very reasonable rates.

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"Shuckless" Strawberry.

THE MOST REMARKABLE BERRY EVER INTRODUCED.

DISTINGUISHED FROM ALL OTHERS.

AN ACQUISITION OF THE GREATEST PRACTICAL VALUE

inasmuch as the berries are ready for the table as soon as picked, thus obviating the disagreeable and tedious task of shucking necessary with other sorts. Aside from its shuckless feature it has many most desirable qualities, which alone would give it a place among the best. It is a strong grower, hardy plant, a late bloomer, and produces berries of uniform size and color in great abundance and of the best quality.

TWENTY OTHER BEST VARIETIES CHEAP.

Plants of the "Shuckless" or other kind sent by mail, post paid, or by express. Write for prices.

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W. P. Rupert & Sons,

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ARE THE INTRODUCERS OF

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It will make you a specialty of sterling worth.

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Just the thing for heavy digging.—Flemer & Felmly, Roselle, N. J.
Satisfactory; strong; stand heavy work.—Taylor, Peters & Skinner, North Topeka, Kan.

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I grow them especially for the Wholesale Trade. All sizes of all the leading hardy varieties. It will pay you to get my prices before placing your orders elsewhere, whether wanting for your trade or for Nursery planting. . . . . .

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And everything in the line of
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Special attention given to furnishing Nurserymen with all kinds of

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Raspberries—Brandywine, Brinckle Orange, Cuthbert, Clark, Hansell, Herstine, Johnson Sweet, Kansas, Lovetts, Mammoth Cluster, Marlboro, Ohio, Palmer, Rancocas, Souhegan, Shaffer's Col., Tyler, Thompson Early, Japan Wineberry, etc.

Blackberries—Agawam, Bangor, Early Cluster, Early Harvest, Erie, Stone Hardy, Kittinney, Lawton, Lucretia Dewberry, Minnewaska, Snyder, Taylor, Wachusett, Wilson Early, Wilson, Jr., etc.

Currants—1 and 2 years extra good. Black Naples Cherry, Champion, Red Dutch, Fay's Prolific. LaVersailles, Lee's Prolific, North Star, White Grape, etc.

Gooseberries—Downing, Golden Prolific, Smith's Improved, Triumph, etc.

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WEIGELIA ROSEA, VARIEGATA, ETC., ETC.,

in Large Lots.

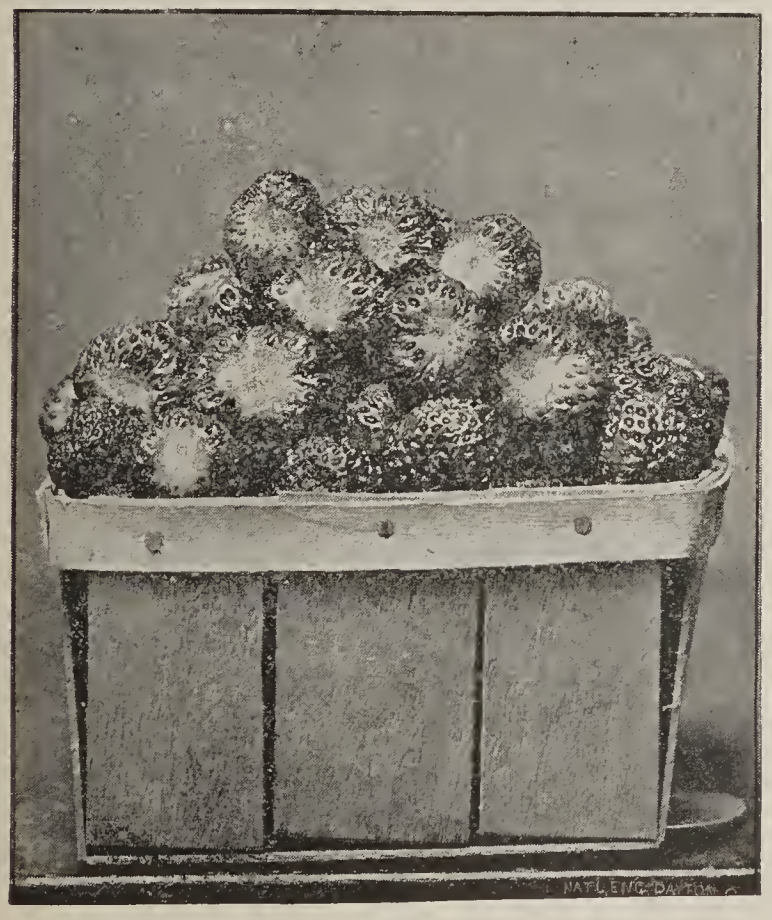
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Ornamental Grasses by the 100 and 1000 at . . . . very reasonable rates.

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"Shuckless" Strawberry.

THE MOST REMARKABLE BERRY EVER INTRODUCED.

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inasmuch as the berries are ready for the table as soon as picked, thus obviating the disagreeable and tedious task of shucking necessary with other sorts. Aside from its shuckless feature it has many most desirable qualities, which alone would give it a place among the best. It is a strong grower, hardy plant, a late bloomer, and produces berries of uniform size and color in great abundance and of the best quality.

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Plants of the "Shuckless" or other kind sent by mail, post paid, or by express. Write for prices.

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Correspond with us and get samples and prices before placing your orders. Introducers of the new early black grape, . . .

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E. K. JENNINGS, Manager.

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Send list of your wants for prices.

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NURSERYMEN, SEEDSMEN AND FLORISTS.

For Spring of 1893 our usual full assortment of Standard and Dwarf Pears, Plums, Peaches. Quince, Mulberries, Apricots, Etc. . . . . .

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Everything graded, handled and packed right. . . . . .

Unequaled facilities for handling large or small orders promptly. . . . . .

Three large cellars filled with stock for early shipment. . . . . .

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CHASE BROTHERS COMPANY,

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FOR SALE OR EXCHANGE .
AT ROCK BOTTOM PRICES.

Apples, **Cherries,** **Apricots,**
Standard Pears, **Plums,** **Roses,**
Dwarf Pears, **Quinces,** **Ornamentals,**

DIAMOND AND MOYER GRAPES, 3 Years, Extra.

CUT LEAF BIRCH, Fine.

QUOTATIONS AND SAMPLES ON APPLICATION.

LIGHT GRADE STOCK. . . .
CLEAN, HANDSOME, THRIFTY,

A GOOD ASSORTMENT . . .
. . OF LEADING VARIETIES.

Apples, $\frac{5}{8}$ to $\frac{11}{16}$, at	4 cts.	**Cherries,** $\frac{5}{8}$ in., at	10 cts.
" $\frac{1}{2}$ to $\frac{5}{8}$, at	$2\frac{1}{2}$ "	**Plums,** $\frac{5}{8}$ to $\frac{11}{16}$, at	7 "
Standard Pears, $\frac{1}{2}$ to $\frac{5}{8}$, at	5 "	" $\frac{1}{2}$ to $\frac{5}{8}$, at	5 "
Dwarf Pears, $\frac{5}{8}$ to $\frac{11}{16}$, at	6 "	**Peaches,** $\frac{1}{2}$ in., at	3 "
" " $\frac{1}{2}$ to $\frac{5}{8}$, at	4 "	**Apricots,** $\frac{1}{2}$ in., at	3 "

A Light Grade Stock in Cellar Ready for Early Spring Shipment.

A SAMPLE WILL SHOW YOU THAT PRICES ARE LOW.

No Charges for Boxing and Delivering at Freight or Express Office. All Prices F. O. B. Rochester.

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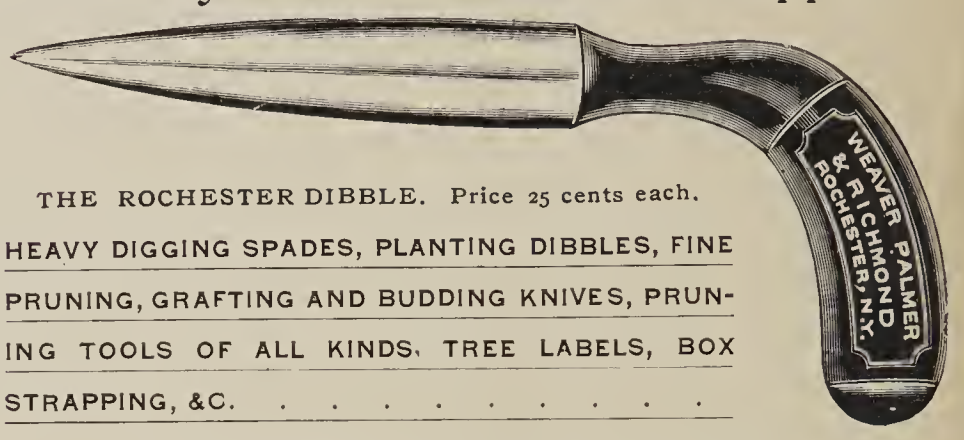
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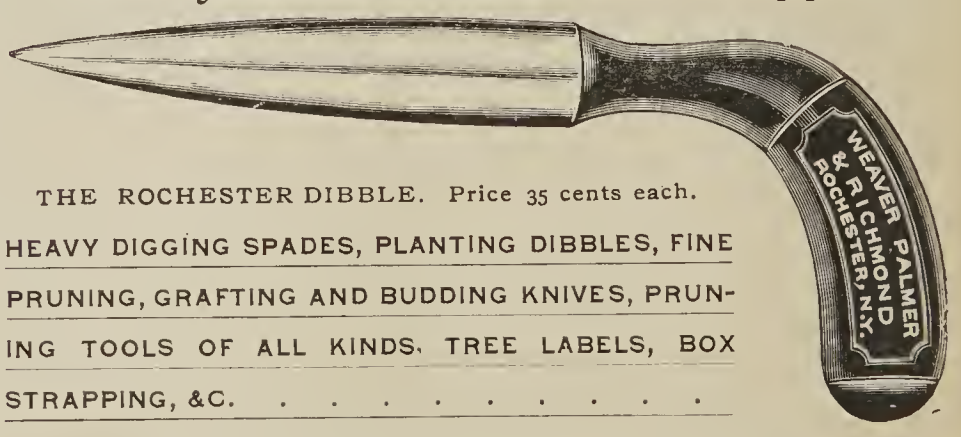
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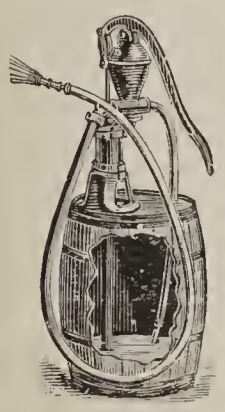
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1	5	2	3	4	American Agriculturist, Chicago, Ill.
1	3	2	4	5	Horticultural Art Journal, Rochester, N. Y.
1	3	2	4	5	Orchard and Garden, Little Silver, New Jersey.
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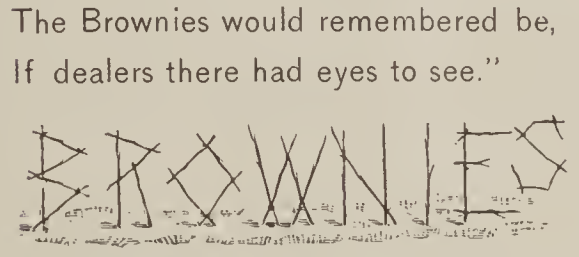
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25 Tollman Sweet
100 Winesap
70 Walbridge
350 Wagener
220 Yellow Transparent
250 Transcendent Crab
150 Whitney's No. 20 Crab
110 Hyslop Crab

STAN. PEARS—¾ AND UP.

70 Keiffer
100 Seckel
20 Angouleme
50 Anjou
70 Lawrence
20 Louise Bonne de Jersey
80 Boussock
200 Clapp's Favorite
400 Sheldon
375 Flemish Beauty
250 Bartlett

PLUMS—¾ AND UP.

30 Cruger's Scarlet
60 Coe's Golden Drop
200 Washington
100 Shipper's Pride
50 Yellow Egg
60 Niagara
2000 Lombard

The above is all good stock, and we shall be glad to quote prices on any of the items you may need.

Please send us your list of "wants" in ornamentals.

E. M. & H. N. HOFFMAN,
Elmira, N. Y.

l.t.o.

SURPLUS STOCK.

We have in surplus the following stock which is clean, straight, thrifty and first-class in every respect :

Oak leaf Mt. Ash,	from	6	to 8	feet.
Tulip trees,	"	6	to 10	"
Purple Beech,	"	4	to 6	"
Silver Maples,	"	8	to 12	"
Sugar, Norway and Sycamore Maples,		8	to 9	"
Carolina and Lombardy Poplars,		9	to 11	"
American Arbor Vitae,	from	18	to 40	in.
Hydrangea Paniculata,	"	30	to 40	in.
Flowering Thorns in variety,	"	4	to 5	feet.
Sambucus var. leaf,	"	4	to 5	"

Three Acres of Apple Seedlings, 2 years very fine.
Sugar, Norway and Sycamore Seedlings, 2 years, very fine.

Send us your list of wants. We have lots of other stock we can quote prices on.

Address STEPHEN HOYT'S SONS,
New Canaan, Ct.

Now is the Accepted Time.

Never in the history of the Nursery trade have such low prices prevailed. In fact, the bottom has entirely dropped out of most all stock that is grown by Nurserymen. If you wish to avail yourself of low prices, kindly look over the articles enumerated below, and then correspond with me.

Fruit Trees.—Standard Pears, Dwarf Pears, Apples, Plums, Peaches, Cherries, Apricots, Quinces, etc.

Small Fruits.—Currants, tree-shaped and bushed; Gooseberries, Industry and Downing; Blackberries, Raspberries, Strawberries, Grapes, etc.

Ornamental Trees. — Catalpa speciosa, Purple Beech, Paul's Double Thorn, Cut-leaf Birch, Young's Weeping Birch, Mountain Ash, Weeping Mountain Ash, Teas' Weeping Mulberry, Russian Mulberry, Silver Maple, Wier's Cut-leaf Maple, Red-flowering Horse Chestnut, Carolina Poplars —the finest stock in the north, Norway Maples.

Nut Trees. — English Walnuts, English Filberts, American Sweet Chestnuts, Spanish Chestnuts.

Evergreens.—Norway Spruce, American and Siberian Arbor Vitæ, Irish Juniper, Colorado Blue Spruce, Douglas Spruce. . . . . .

Ornamental Shrubs and Vines.—Altheas, Purple Berberry, Calycanthus, Deutzias, California Privet, Golden-leaf Elder, Golden-leaf Syringas or Mock Orange, Honeysuckles, Lilacs, Ivys, Hydrangeas, Wistarias, Weigelias, Spireas, Rhododendrons—a large stock all grades, Hardy Azalias. . . . .

Roses.—Hybrid Perpetuals, Teas, Mosses and Climbers. Also a large and fine assortment of Tree Roses. Special inducements offered. . . . . .

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Special inducements on Plum Trees and Carolina Poplars.

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NEWARK, WAYNE CO., N. Y.

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ASPARAGUS AND RHUBARB.—Fine two year old plants.

We guarantee satisfaction to all purchasers. Correspondence earnestly solicited. Price as low as the lowest for stock of first quality.

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GRAPE VINES.—Leading varieties.

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With or without land, situated on railroad and in Nursery center. For particulars address

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APPLES, PEARS, PLUMS AND CHERRIES.

Assortment now unbroken. Prices as low as any Reputable Firm and Stock as good as the best.

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APRICOTS (on Plum,) PEACH, CURRANTS, RASPBERRIES,
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Partner wanted with $10,000 to $20,000 capital. I want a broad-gnage man with courage, enterprize and able to attend to the books, correspondenee and office business of a large land, nursery and orehard-planting company. I have on my side the best location in the world; 500 aeres of fine land in posession, and an option on 10,000 more; 400,000 trees now growing in nurscry, and I expect to plant and sell some thousands of aeres of the most profitable orehards on the coast. Oregon is pre-eminently highest among the apple, prune, plum and eherry belts of the world. Prineipals only. Address,

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CLEMATIS, pot-grown and from the open ground.
HARDY GHENTISH AZALEA, in first quality varieties.
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ROSES, dwarf budded and **TREE ROSES.**

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Norway Maples, Peach Trees,
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All my own growing, at moderate prices.

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Like its parent, "Fall Maiden-Blush," but keeps till Spring.

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Small Fruits: Native and Foreign Grapes, Currants, Gooseberries (English and Native), Raspberries, Blackberries, Asparagus, Rhubarb. . . . . .

Ornamental Trees: Imperial Cut-leaf Alder, Purple Beach, Cut-leaf Birch, Catalpa, Elms, Horse Chestnuts, Lindens, Magnolias, Maples, Mountain Ash, Poplars, Walnuts, Willows. . . . . .

Evergreens: Norway Spruce, Balsam Fir, Arbor Vitæ, Junipers. . . . . .

Ornamental Shrubs and Vines: Altheas, Almonds, Calycanthus, Cornus Elegantissima, Deutzias, Elders, Hydrangeas, Honeysuckles, Ampelopsis, Lilacs, Spireas, Snowballs, Syringas, Weigelias, Wistarias, etc. . . . . .

TREE ROSES . . HYBRID ROSES, TEA ROSES, CLIMBING ROSES, MOSS ROSES, AZALIAS, RHODODENDRONS, CELMATIS, INDUSTRY GOOSEBERRY. . . . . .

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LAKE SHORE NURSERIES.

Grape Vines by the Million.

Agawam,	Brighton,	Catawba,
Concords,	Delaware,	Elvira,
Empire State,	Hartford,	Ives,
Jessica,	Lindley,	Martha,
M. Diamond,	Moore's Early,	Niagara,
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Worden,	Wyoming Red.	Wilder.

We have at the head of this department Mr. C. Schifferli of Fredonia, N. Y., who has been actively engaged in raising vines for the past seventeen years, and late of the firm of Wheelock, Schifferli & Clark. He knows how to grow a grape vine and we assure our patrons that our grade will be fully up to the Fredonia Vine. We shall have a good stock of both one and two year vines for this fall and next spring trade. Call and see us if you can; if not, send us your list of wants to price.

We have a general line of nursery stock including Standard and Dwarf Pear, Plum, Cherry, Peach and Quince.

Our Packing Grounds are at the corner of Brown's Avenue and 26th street, five minutes walk from the street car.

Dealers will find it a very convenient place to bill up.

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Japan Pear Seedlings . .

Are the best stock for all sections. They do well on both light and heavy soils. Order a few thousand and be convinced. We use no others. Prices low in quantity. Quotations given on application.

Peach Pits. . . . .

We have a few Smock Pits of last season's crop, and can offer low to close them out.

OUR ARRANGEMENTS FOR THIS SEASON WILL INSURE A GOOD LOT OF THE FOLLOWING:

Smock, Southern Naturals, Promiscuous.

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One thousand acres devoted to the production of

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Splendid stock, low rates on . . . . . .

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Strong, two-year field-grown Hybrid Perpetual Moss and Climbers.

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usual large assortment

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INDUSTRY GOOSEBERRY.—Extra fine plants.

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A splendid collection of **ORNAMENTAL TREES, SHRUBS, Etc.**, embracing the hardiest and best. Fine stock of Wier's Cut-Leaved Maple, 8 to 10 ft; Horse Chestnuts, 6 to 7 feet; Aucuba-Leaved Ash, (Golden Spotted foliage) 6 to 8 feet; Golden Oak, all sizes; Silver Maple, 8 to 10 feet; Carolina Poplar, 8 to 10 feet; Double-flowering Thorns.

Splendid plants of all the best shrubs including: Golden Syringa, Deutzias, Forsythias, Spiræas, Barberries, Syringas, Lilacs, Calycanthus, &c., &c.

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General Descriptive Catalogue, 160 pages and numerous illustrations, also a supplementary catalogue of new and rare trees, shrubs, etc., free. Wholesale catalogue for fall, ready July 1st, free.

Special quotations on large lots. Correspondence solicited.

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STANDARD APPLES, STANDARD PEARS,
RUSSIAN APRICOTS, on Peach and Plum,
PEACHES,
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LEE'S PROLIFIC CURRANT,
WEEP'G CUT LEAF BIRCH, MOUNTAIN ASH, Oak L'v'd,
PURPLE LEAF BIRCH, WHITE BIRCH,
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Prices given on Application. • Correspondence Solicited.

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Apples; Cherries; Pears, standard and dwarf; and Plums, leading varieties. .
Currants, Cherry, Fay's, White Grape, Champion and Ismay's Market. . . .
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Rhubarb, Monarch and Early Prince. . .
Catalpa; Elms; Horse Chestnuts; Maples; Mt. Ash, Oak Leaved and Weeping; Poplars; Purple Beech; Service Trees.
Altheas; Honeysuckle, upright; Lilacs; Spireas; Syringas; Wiegelias, &c.; Akebia; Ampelopsis; Bigonia; Dutch Pipe; Honeysuckles, &c. . . . . .
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STANDARD AND DWARF PEARS, CHERRIES,
EUROPEAN AND NATIVE PLUMS, ...
H. P., CLIMBING AND MOSS ROSES, on own roots.

All strictly two years old, thrifty, well grown.

Also a fine stock of Apples, Peaches, Apricots, Quinces, Gooseberries, Currants, Grape Vines, Blackberries, etc.

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Car Lots a specialty. **Station B, St. Louis. Mo.**

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GROWERS OF

SMALL - FRUIT - PLANTS.

Special attention given to furnishing Nurserymen with all kinds of TRANSPLANTS ON CONTRACT.

We offer for the Fall of '93, the largest and most complete collection in the United States, of high grade SMALL FRUIT PLANTS.

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Currants—Black Naples, Cherry, Black Champion, Red Dutch, Fay's Prolific, La Versailles, North Star, Lee's Pro., W. Grape, etc.

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Also a large stock of 2 yrs. **Grapevines,** of all the leading kinds.

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Rhubarb—Myatt and Victoria, 20,000 (3 yrs.) and 500,000 (2 yrs.) also large quantity 1 year.

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Special quotations on large lots.

HOFFMAN NURSERIES.

SURPLUS STOCK
FOR THE FALL OF 1893.

APPLES—¾ AND UP.

90 Alexander
850 Ben Davis
20 Caroline Red June
20 Ewalt
90 Fameuse
90 Fallawater
25 Gravenstein
220 Grimes' Golden
225 Hubbardston
25 Hendrick's Sweet
80 McIntosh Red
110 Maiden Blush
500 Northern Spy
325 Oldenburg
140 Primate
800 Red Astrachan
150 Rambo
40 Red Bcitigheimer
200 Rhode Island Greening
110 Seek-no-further
75 Stark
75 Stump
100 Tetofsky
25 Tollman Sweet
100 Winesap
70 Walbridge
350 Wagener
250 Transcendent Crab
150 Whitney's No. 20 Crab
110 Hyslop Crab

STAN. PEARS—¾ AND UP.

70 Keiffer
100 Seckel
50 Anjou
70 Lawrence
80 Boussock
200 Clapp's Favorite
400 Sheldon
375 Flemish Beauty
250 Bartlett

PLUMS—¾ AND UP.

30 Cruger's Scarlet
60 Coe's Golden Drop
200 Washington
100 Shipper's Pride
50 Yellow Egg
60 Niagara
2000 Lombard

The above is all good stock, and we shall be glad to quote prices on any of the items you may need.

Please send us your list of "wants" in ornamentals.

E. M. & H. N. HOFFMAN,
Elmira, N. Y.

l.t.o.

"Whirlwind." "Whirlwind."

New Double Anemone

"Whirlwind."

IN the reading matter of this number will be found a full description of the new and only Double Anemone.

It is one of the grandest novelties of late introduction, and being perfectly hardy will make a good seller.

Agents can use it as an opening wedge, as well as making large sales.

For full particulars and price, write

James Vick's Sons,

ROCHESTER, N. Y.

SURPLUS STOCK.

We have in surplus the following stock which is clean, straight, thrifty and first-class in every respect :

Oak leaf Mt. Ash,	from 6 to 8	feet.
Tulip trees,	" 6 to 10	"
Purple Beech,	" 4 to 6	"
Silver Maples,	" 8 to 12	"
Sugar, Norway and Sycamore Maples,	8 to 9	"
Carolina and Lombardy Poplars,	9 to 11	"
American Arbor Vitae,	from 18 to 40	in.
Hydrangea Paniculata,	" 30 to 40	in.
Flowering Thorns in variety,	" 4 to 5	feet.
Sambucus var. leaf,	" 4 to 5	"

Three Acres of Apple Seedlings, 2 years very fine.
Sugar, Norway and Sycamore Seedlings, 2 years, very fine.

Send us your list of wants. We have lots of other stock we can quote prices on.

Address STEPHEN HOYT'S SONS,
New Canaan, Ct.

Now is the Accepted Time.

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Small Fruits.—Currants, tree-shaped and bushed; Gooseberries, Industry and Downing; Blackberries, Raspberries, Strawberries, Grapes, etc.

Ornamental Trees. — Catalpa speciosa, Purple Beech, Paul's Double Thorn, Cut-leaf Birch, Young's Weeping Birch, Mountain Ash, Weeping Mountain Ash, Teas' Weeping Mulberry, Russian Mulberry, Silver Maple, Wier's Cut-leaf Maple, Red-flowering Horse Chestnut, Carolina Poplars —the finest stock in the north, Norway Maples.

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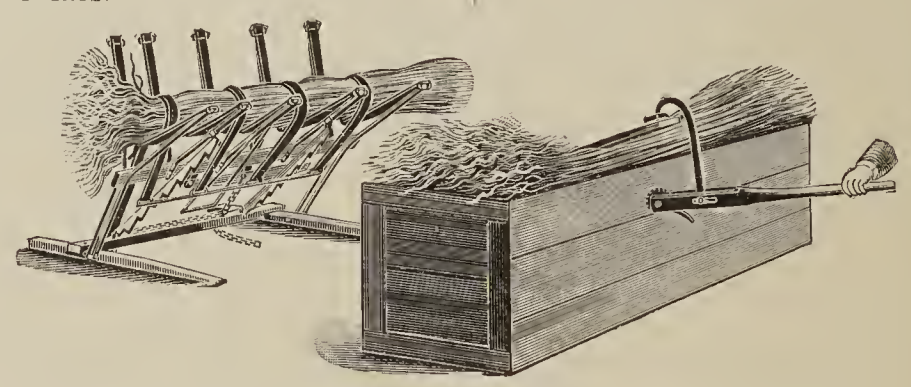
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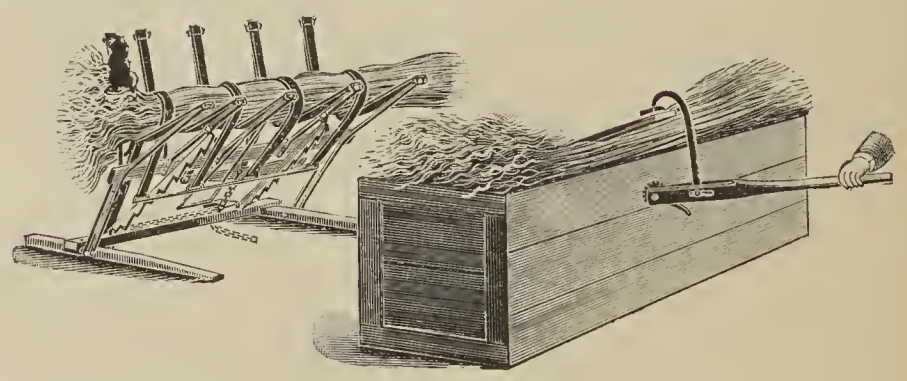
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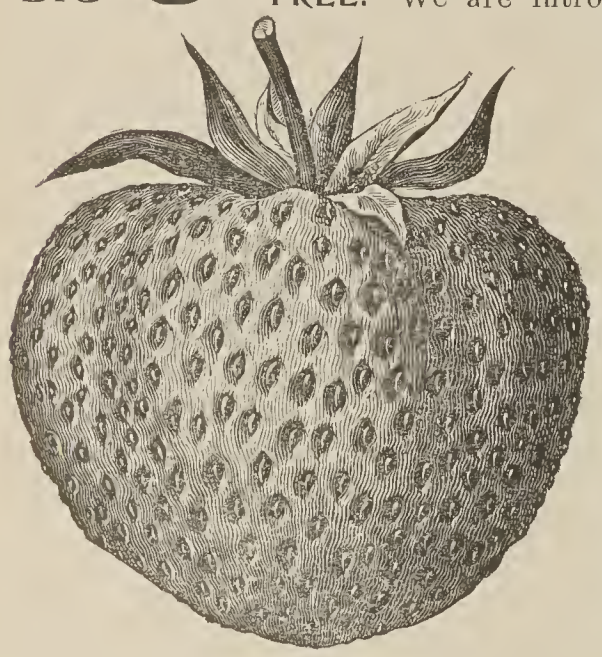
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1	5	2	3	4	American Agriculturist, Chicago, Ill.
1	3	2	4	5	Horticultural Art Journal, Rochester, N. Y.
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